EASTERN BENGAL DISTRICT GAZETTEERS

VOL. XI

JALPAIGURI

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EASTERN BENGAL AND ASSAM
DISTRICT GAZETTEERS.

JALPAIGURI.

BY

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PREFACE.

In writing this volume, I have found Mr. Sunder's Report on the Survey and Settlement of the Western Duārs (1895) of great assistance. I desire also to acknowledge my indebtedness to the many persons who have helped me in compiling this account of the Jalpāiguri district. The map of the district has been kindly prepared by Mr. J. A. Milligan, I.C.S., Settlement Officer of Jalpāiguri.

JOHN F. GRUNING.

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GAZETTEER

OF THE

JALPAIGURI DISTRICT.

CHAPTER I.

PHYSICAL ASPECTS.

THE district of Jalpāigurī lies between 26° 0′ and 27° 0′ north latitude, and between 88° 20′ and 89° 53′ east longitude; it contains an area of 2,961 square miles, and its population, which was 787,380 souls at the census of 1901, has increased considerably in recent years. The principal town—in fact the only place in the district of sufficient size to be called a town—and the administrative head-quarters of the district and of the Rājshāhi division, is Jalpāigurī, situated on the west or right bank of the Tīsta river in 26° 32′ N. and 88° 43′ E. The name Jalpāigurī is derived from *jalpāi*, an olive tree, and *gurī*, a place; it means, therefore, the place of the *olive* trees, of which there used at one time to be many in the town. GENERAL DESCRIPTION.

The present district of Jalpāigurī consists of the Western Duārs, annexed in 1865 after the war with Bhutān, and the thānās of Jalpāigurī,* Bodā, Rājganj† and Pātgrām, separated from the Rangpur district in 1869 and 1870. It is bounded on the north by the district of Darjeeling and the Independent State of Bhutān, on the south by the district of Rangpur and the State of Cooch Behār, on the west by the districts of Darjeeling, Purnea and Dinājpur, and on the east by the Eastern Duārs, which forms part of the district of Goālpārā, the right bank of the Sankos river marking the boundary line. The Pātgrām thānā is an isolated tract, separated entirely from the main district and surrounded on all sides by the Cooch Behār State. Boundaries.

The district comprises two well defined tracts, which differ alike in history and in administration. The older portion, which lies for the most part to the west of the Tīsta, though it comprises also the Pātgrām thānā to the east of that river, is permanently settled, and resembles closely the district of Rangpur of which it once formed part. East of the Tīsta, and hemmed in between the Independent States of Bhutān on the north and Cooch Behār on the south, lies a strip of submontane country about 22 miles in width, known as the Western Duārs, which was annexed from Bhutān in 1865. This part of the district is included in the Natural divisions.

* Formerly Fakirganj. | † Formerly Sanyāsikātā or Siliguri.

list of scheduled districts, but most of the ordinary laws and regulations of Bengal are now in force in it.

Scenery. The country west of the Tīsta river and the Pātgrām thānā differs little from the neighbouring districts of Rangpur and Dinājpur. The continuous expanse of level paddy fields is broken only by the groves of bamboos, betel-nut palms, and fruit trees, which surround the homesteads of the substantial tenant-farmers. There is little uncultivated land with the exception of an extensive *sāl* forest, covering an area of 81 square miles, belonging to the Rāikat of Bāikanthpur. In the cold weather and particularly in the months of November and December, a magnificent view of the snowy peaks of the Darjeeling Himālayas can be seen, with Kinchinjanga (28,146 feet) towering above the rest.

Sir W. W. Hunter, in his Statistical Account of Jalpāiguri, gives the following description of the Western Duārs :—'The Bhutān Duārs, the tract which was annexed at the close of the war of 1864-65, is a flat, level strip of country, averaging about 22 miles in width, running along the foot of the Bhutān hills; its chief characteristics are the numerous rivers and hill streams which intersect it in every direction, and the large tracts of *sāl* forest and heavy grass and reed jungle, interspersed with wild cardamoms. These grass and reed tracts are especially dense and luxuriant along the banks of the rivers and streams, where they grow many feet in height; in some places they are impenetrable by man. Here the beautiful cotton tree (*Bombax malabaricum*) is to be found growing in great luxuriance and with surprising vigour and rapidity, resisting even the action of the fires by which the jungles and under-growth are yearly consumed at the commencement of every cultivating season. With this single exception, these vast tracts of grassy jungle are almost treeless, and bring out into greater relief the village sites, situated few and far between. These little hamlets are remarkable for the most luxuriant vegetation. Large clumps of bamboos and groves of plantain trees hem them in on all sides, almost hiding the houses from view. Above them are seen the tall, graceful betel-nut palms, and here and there a few other large trees, such as mango, jack, and pipal; and round about the dwellings, in fact up to the very doorways, are shrubs and creeping-plants of endless form and variety. Fine fields of rice and mustard are also found in the vicinity of the villages. The scenery in the north of the Duārs, along the foot of the mountains, where the large rivers debouch upon the plains, is very grand and beautiful, especially at the point where the Sankos river leaves the hills. In the neighbourhood of the Bhutān range, for from five to ten miles before reaching the hills, the land rises gradually. In this tract the soil is only from three to four feet deep, with a substratum of gravel and shingle; and in the dry season the beds of the streams for some miles after leaving the

hills are dry, the water re-appearing farther down. Owing to the difficulty of procuring water, there are no villages in this region.'

Since the above account was written, a great change has taken place. Few districts in India have developed as rapidly as the Western Duārs. The northern tract along the base of the hills, between the Tīsta and Torsā rivers, is now covered by prosperous tea-gardens, separated only by rivers or occasional areas of reserved forest; east of the Torsā the chain of tea-gardens continues right up to the Sankos river, but is broken up by larger stretches of forest. South of the tea-gardens as far east as the Torsā river, little jungle is left except on the banks of rivers and streams and in the vicinity of the forests; nearly the whole of the land is under cultivation and grows magnificent crops of rice, jute, tobacco and mustard. Homesteads of well-to-do tenant-farmers are seen in every direction, and the increase of prosperity is shown by the number of houses with galvanised iron roofs which are springing up on every side. On the other side of the Torsā there is more jungle and large areas of reserved forest containing valuable *sāl* and *sissu* trees may be seen; but even in this remote part of the district, cultivation is extending fast, and the jungle is disappearing rapidly.

The scenery near the hills, particularly where the Tīsta, Jaldhākā, Rāidhak, and Sankos rivers debouch into the plains is very fine; west of the Torsā the wooded hills of Bhutān with Kinchinjanga in the background form a splendid picture, and though the view changes farther east where the reserved forests intervene between the cultivated land and the hills, these forests are not without a beauty of their own. No better idea of the forests in the Duārs can be obtained than on the road between Buxā Road station and Santrabāri where the climb up to Buxā Cantonment begins. Fine *sāl* trees abound and farther north when the orchids are in bloom in March and April the forests are very beautiful.

HILLS.

The only hills in the district are the Sinchula Hills to the east of the Torsā, which rise abruptly to a height of from 4,000 to 6,000 feet, and form the boundary between British and Bhutān territory. The military station of Buxā is built on an outlying spur of this range on hills of heights from 1,659 to 2,457 feet. Buxā Duār is one of the principal passes into Bhutān and a hill road leads direct from it to Muricham in Bhutān.

RIVER SYSTEM.

The rivers and streams of the Jalpāigurī district are very numerous, particularly in the Western Duārs; they flow from north to south, and as they debouch suddenly from the hills on to the plains, and rise and fall with great rapidity, frequently changing their courses, they often do much damage. Near the hills they are full of boulders, and rapids are met with; lower down they are sandy; their banks are ill-defined, and as they bring down quantities of silt and debris from the hills, they

continually tend to raise their beds. Owing to the porous character of the soil near the hills, many of the rivers in the Western Duārs sink below the surface and re-appear a few miles farther on.

The principal rivers in the district from west to east are the Mahānadī or Mahānandā, Karātoyā, Tīsta, Jaldhākā, Duduyā, Mujnāi, Torsā, Kāljāni, Rāidhak, and Sankos. A short account of these is given below.

Mahānadi. The Mahānadī has its source near Mahaldirām in the Darjeeling district and flows in a southerly direction to a short distance above Silīgurī where it alters its course slightly towards the west and enters the Jalpāigurī District. From this point it forms the boundary between Jalpāigurī and the Darjeeling and Purnea districts. At Titālyā* it passes into Purnea and, after traversing Mālda, falls into the Ganges within the Rājshāhi district. Dr. Buchanan-Hamilton in 1809 thus describes this river, so far as it concerns the Jalpāigurī district:—

'The Mahānandā, for about five miles after entering upon the plains, forms the boundary between the kingdom of Nepāl and the Company's territory. For about six miles it separates this jurisdiction from that of Purnea and then flows a long way through that district until it reaches the frontier of Dinājpur. So far as it continues on the frontier of Rangpur' (now Jalpāigurī) 'the Mahānandā is inconsiderable. It has, indeed, a channel of no small size, being perhaps three hundred yards wide; but in the dry season the quantity of water is trifling, and even in the highest floods it does not overflow its banks. It rises suddenly and falls quickly, so that boats do not attempt to navigate it; and even in the rainy season it is only frequented by canoes, which ascend with difficulty, but aid in floating down a little timber. In dry weather its stream is beautifully clear. From this district, the Mahānandā receives three small branches which take their rise from springs in the fields. The most northerly is the Trināyi, which joins the Mahānandā a little south of Sanyāsikātā. The next is the Ranchandi, which, rising in Sanyāsikātā, afterwards separates that division from that of Bodā. The third is a more considerable stream; it takes its rise in Sanyāsikāta from two heads, the eastern one called Chakar and the western Dayuk. After this junction this last name is preserved, and after passing through the division of Bodā, it joins the Mahānandā in the Purnea district.'

Near Silīgurī the bed of the Mahānadī is stony and the Eastern Bengal State Railway obtains much of its ballast from this source.

The name Mahānadī is a Bengali corruption of the Lepchā word Mahaldi.

* I have adhered to the spelling adopted in the Imperial Gazetteer. The transliteration of the ordinary Bengali spelling is Tetulia.

The Karātoyā rises in the Bāikanthpur forest in the extreme north-west of the district and after a very winding course flows into the Rangpur district at the little village of Rāiganj, where a small market is held. During the rains boats of a thousand maunds burden can navigate it as far as Ambāri Fālākātā; north of this the stream dwindles and becomes altogether inconsiderable. Its principal tributaries are the Tālmā and Chanī on the right, and the Sāhu on the left bank; they are rapid torrents in the rains and almost dry during the rest of the year. The banks of the Karātoyā are almost everywhere cultivated, though here and there are small patches of grass and scrub jungle which occasionally hold a leopard. The Kārātoyā.

In 1809 Dr. Buchanan-Hamilton wrote the following account of this river where it passes through the present district of Jalpāigurī:—

'The topography of this river is attended with numerous difficulties. It runs for about forty-five miles through the centre of the north-western divisions of this district and is then swallowed up by the old channels of the Tīsta. It forms the boundary for a few miles between Nepāl and the dominions of the Company. It then passes a mile or two through the latter, and enters a small territory' (now the Ambāri Fālākātā tahsil) 'belonging to Bhutān, through which it passes for five or six miles, and re-enters the district as a pretty considerable river, which in the rainy season admits of being navigated. Its channel is not so wide as that of the Mahānandā, but it does not rise or fall so rapidly. More timber is floated down its channel than that of the Mahānandā; and when it has reached Bhajanpur, a mart in Bodā, it is frequented in the rainy season by boats of 400 maunds burden. During this part of its course, it receives from the west a river, which rises from the low hills of the territory of Sikkim, with two heads, named the Jurāpāni and Sanga, which unite under the latter name in the division of Sanyāsikātā, and fall into the Karātoyā in Bodā. Below this for some distance, the Karātoyā marks the boundary between Rangpur' (now Jalpāigurī) 'and Purnea, after which turning to the eastward, it passes entirely through the former, and has on its southern bank a considerable mart named Pochagarh, to which boats of 1,000 maunds, or about 35 tons burden, can come in the rainy season. It is, however, only boats of about half this tonnage which usually ascend so far. A little above Pochagarh the Karātoyā receives from the north, a small river named the Chanī, which takes its rise in a field in Sanyāsikātā division, and has a course of about fourteen miles. Below Pochagarh, the Karātoyā receives from the same direction a river named the Tālmā, which rises in the forests towards the frontier.

'From this point the Karātoyā is a very considerable river, passing through the division of Bodā, and in parts separating it

from detached portions subject to the Rājā of Cooch Behār, until it receives from the Tīsta a branch called the Ghorāmārā. The united stream for about two miles retains the name of Ghorāmārā, for the old channel of Karātoyā has become almost dry; but at Sāldāngā, a considerable mart, the Karātoyā again resumes its name, and in the rainy season is usually frequented by boats of from five to six hundred maunds burden. The Karātoyā then continues its course to the south-east for about three miles, when it joins the old Tista and again loses its name, although it is at present the most considerable stream; but the immense sandy channel of the Tīsta attests its former grandeur. In fact, when Major Rennel made his survey, the great body of the Tīsta came this way and joined the Atrāi; but in the destructive floods of 1194 B. S. or 1787 A.D. the greater part of the water of the Tīsta returned to its more ancient bed to the east (in which it still continues to flow), and has left this immense channel almost dry. I shall therefore proceed to give an account of this channel as forming the Karātoyā.

'It is called the Burī or Old Tīsta, although from the course of the Karātoyā it is evident that the original direction of the Tīsta must have been somewhat near its present bed, that is to the eastward. This Old Tista separates from the great river at a place called Fakirganj, about nineteen miles north from its junction with the Karātoyā; and, except during the rainy season, it is not navigable by canoes. Even in the floods it does not admit boats of any size. Attempts have been made, by order of Government, to restore at least a part of the water of the Tīsta to this channel, but the efforts have been in vain, and the waters are still (1809) diminishing every year. The water of the Old Tīsta is still further lessened by the departure of the Ghorāmārā, after which it continues a very trifling stream with an immense channel until it receives the Karātoyā at Debiganj. At all seasons canoes navigate this portion of the river, and boats of a thousand maunds burden are often loaded at this mart, but the vessels usually employed are from four hundred to six hundred maunds. The river continues nearly of the same size until it reaches the frontier of Dinājpur, about nine miles below Debiganj; and the name of the Old Tīsta continues to be given to it after it has passed into Dinājpur, until it reaches the mouth of a canal which connects it with the Dhāpā river. There it assumes the name of the Atrāi.'

It will be seen that Dr. Buchanan-Hamilton describes the united stream, after the junction of the Karātoyā at Debiganj as the Old Tīsta; it is, however, marked in subsequent maps as the Kurto or Karto river. The Karātoyā proper branches off from the east or left bank of the Old Tīsta or Karta river, just above the point where the latter enters the Dinājpur district. After a few miles, under a variety of names, it marks the boundary between Rangpur and Dinājpur, until it flows into the Bogrā district.

These changes of name, which are most confusing, arise from the alteration of the physical features of the country caused by the floods of 1787, when the Tīsta deserted the channel, by which it passed its waters into the Ganges, for its present course by which it joins the Brāhmaputra. Dr. Buchanan-Hamilton writes that 'the floods of 1787 seem totally to have changed the appearance of this part of the country, and to have covered it with beds of sand, so that few of the old channels can be traced for any distance; and the rivers which remain seldom retain the same name for more than three or four miles in any one part of their course. The name of the Karātoyā, in particular, is completely lost for a space of about 20 miles, and is only discovered again a little south of Darwānī (a police station and village in the north of the present district of Rangpur).'

The Tīsta. The Tīsta is the largest river in the district. It rises on the far side of the Himālayas and, after passing through Sikkim, bursts through the mountain barrier and enters the plains through a gorge known as the Sivok Golā pass. It then traverses the Darjeeling Tarai and enters the Jalpāigurī district at its north-west corner. For some distance from this point its bed is stony and it contains little water during the dry season, while the swiftness of its current and the numerous rapids render it useless for navigation during the rains. At Jalpāigurī and for a considerable distance above it, large boats can navigate the river all the year round though it is always dangerous in a heavy flood, when the ferry boats between Jalpāigurī and Barnes Junction often have to stop working and the only way to reach the Western Duārs is by rail *viâ* Parbatipur and Lālmanir Junctions. It has no tributaries of any importance on the right or west bank; on the left bank the principal tributaries are the Lesu or Lish, the Ghish and the Dhallā rivers. The Dhallā is formed by the confluence of the Chel, Māl and Neorā rivers and brings down a considerable volume of water. The Tīsta forms the boundary of the Western Duārs, dividing it from the permanently settled portion of the district which formerly belonged to Rangpur; it enters the Rangpur district from Pātgrām and falls into the Brāhmaputra a little above the town of Rāniganj.

In the description given above of the Karātoyā river some account will be found of the old course of the Tīsta before the disastrous floods of 1787. Major Rennel's atlas of 1770 shows this old course and at page 352 of his Memoir of a Map of Hindustan, he states:—

'The Tīsta is a large river which runs almost parallel to the Ganges for nearly a hundred and fifty miles. During the dry season, the waters of the Tīsta run into those of the Ganges by two distinct channels, situated about 20 miles from each other, and a third channel at the same time discharges itself into the Meghna; but during the season of the floods, the Ganges runs into the Tīsta

whose outlet is then confined to the channel that communicates with the Meghna.'

Dr. Buchanan-Hamilton, writing about 1809, makes the following remarks about the Tīsta and its branches during its course through the Jālpaiguri district :—

'The Tīsta enters this district at its northern extremity, where it is bounded by the country of Sikkim subject to Nepāl' (now the district of Darjeeling), 'and continues for about twenty-three miles from thence to the boundary between the Company's territory and that of the Deb Rājā of Bhutān' (now the western Duārs). 'It is here an exceedingly wide channel, from six hundred to eight hundred yards wide. At all seasons it contains a great deal of water and has a swift current, but its navigation is somewhat impeded by stones and rapids. The Tīsta begins to swell in spring, and usually rises two or three inches between the middle of April and the middle of May, owing to the melting of the snow in the mountains to the north; but no considerable increase takes place in its volume until the setting in of the rainy season. Immediately below Jalpāiguri town, the Tīsta has the Company's territory on both sides, and receives from the west a small river named the Karla, on the western bank of which Jalpāiguri is situated. This stream takes its rise from among the lower hills in the Sikkim territory, and flows through the district for about twenty-four miles. Canoes frequent it in the dry season, and in the floods large boats are able to ascend it for a considerable distance. A short distance below this, on the west bank of the Tīsta, is the mart of Madarganj. Although here a very large river, boats of a greater burden than 150 maunds cannot ascend the Tīsta beyond this point in the dry season. In the rains boats of any size may come. A little below Madarganj, the Tīsta sends off a branch known as the Buri or Old Tīsta, and which at the time of Major Rennel's Survey was its principal channel. On sending off the Old Tīsta, the great channel turns eastward; and after passing Byankra, a mart in Fakirganj division, it receives the Kayā, a small stream which rises in Bhutān, and has on its banks a place of some trade called Jorpokri. The Tīsta then enters Cooch Behār.'

The Jaldhākā.

The Jaldhākā river rises in the Bhutān hills and drains the eastern slopes of the Rishi-la mountain in the Darjeeling district, of which it forms the boundary. After entering Jalpāiguri, it flows in a southerly direction until it approaches the boundary of the district, where it takes a sweep to the east and enters Cooch Behār territory. It joins the Torsā in the Rangpur district and the combined rivers under the name of the Dharla flow into the Tīsta. About a mile north of the Bengal-Duārs railway line the Jaldhākā divides into two branches, the western of which is called the Hāthinala; these are spanned by two fine bridges each 600 feet long joined by a lofty embankment. The streams unite again

about half a mile below the bridges. The Jaldhākā is a wide river but shallow in proportion to its size and is fordable everywhere during the cold weather; its current is very rapid and it rises and falls with great suddenness; some account of the flood in 1906 will be found later on. Its principal tributaries within the Jalpāigurī district are the Murti, a considerable stream, flowing from the Dālinkot mountains in Darjeeling; and the Dāinā, also a large stream, which rises in the Bhutān hills and falls into it on its east bank in *parganā* Morāghāt, opposite Nāothoā Hāt. The Dāinā is a particularly troublesome river, frequently changing its course and doing much damage to roads and cultivation. The Jaldhākā river is the boundary between the Māinagurī and Fālākātā *tahsīls*.

The Duduyā.

The Duduyā is formed by the combined waters of the Gāirkātā, Nanāi, Angrabāshā and other small streams, all of which rise in the north-west of the Duārs. It flows in a south-easterly direction and enters the Cooch Behār State at Dakālikobā Hāt. It is navigable by boats of fifty maunds as far as the Jalpāigurī-Alīpur road. Its principal tributaries are the Kalua or Rehti, Barābank, Dim-Dima and Tāsāti, which rise in the Bhutān hills or the north of the Duārs and join it on its east or left bank.

The Mujnāi.

The Mujnāi rises in the southern slopes of the Bhutān hills near Hantapārā and, after a winding southerly course, enters Cooch Behār just below Fālākātā, up to which point it is navigable by boats of fifty maunds burden. There is a good road between Fālākātā and Hantapārā and the Lankapārā and Hantapārā tea estates cart most of their tea along it, putting it on country boats at Fālākātā and thence floating it down the Mujnāi to the Brāhmaputra near Dhubri. The river is the boundary between *parganās* Lakshmipur and West Madāri of the Fālākātā *tahsīl*.

The Torsā.

The Torsā rises in the Chumbi valley of Tibet, where it is called the Māchu, and flows through Bhutān. It enters British territory by the Bala Duār and flows south through the Western Duārs, separating the Fālākātā and Alīpur *tahsīls*; it enters Cooch Behār at the village of Nekobarpārā. It is a large river and brings down much water in the rains. Its tributaries on the right or west bank are numerous small streams, none of which are of much importance, and on the left bank the Hānsimārā; the latter may be more properly described as a branch of the main stream, for it is thrown off by the Torsā, just above the point where that river enters the Western Duārs and, after a course parallel to it of about 15 miles, it rejoins the parent stream.

In his report on Bhutān written in 1866, Lieutenant C. M. MacGregor gave the following description of the Torsā river:—

'The Torsa or Am-Mochu river is one of the principal rivers in Bhutān and takes its rise in the Chumulāri range. Its total course from this point to where it issues into the plains at Bala Duār is said to be not less than 160 miles, of which some 70

miles are in Tibetan territory, where it waters the valley of Phare, passing by that place and by Chumbi and Rinchingāon, between which places it is crossed by numerous bridges communicating with the valleys on either bank. At Chumbi it is declared to be a deep and swift river, some forty yards broad; thence it continues flowing south for some 15 miles, where it first enters Bhutān territory, and being confined between high, precipitous and rocky banks, it rushes past with great fury. It then flows on, and a mile or two above the point where it is crossed by the road from Dālinkot, it gives a turn to the east. It is here crossed by a bridge, which is described as a compound of a suspension and pier bridge, and Eden informs us that it is here "a very beautiful river," deep, very rapid, and broad; full of enormous boulders which make it one continuous line of white, sparkling foam. Its height at this point is 3,849 feet, and it runs through a beautiful small valley, receiving on its left, a short way down, the Sukchu, a small torrent, and immediately afterwards the Sechu. From this last point it changes its direction south-east and continues rushing impetuously on, enclosed again between high precipitous cliffs, and receiving at some twenty miles the Samchu, its first considerable feeder, and which rises in the Tegong-la. Some seven miles beyond, it is crossed by a bridge on the main road from Pāro to Chamurchi; thence its course becomes still more southerly till just before reaching the Bala it turns once more due east. At this point it takes the name of the Torsā, and is, even in dry weather, a fierce, swift river having an average depth of not less than 4 feet and being fordable only with very great difficulty. Just where it takes its last turn to the east in the mountains, it is joined by the Penchu, a large mountain stream rising in the Loomla.'

The Kāljāni. The Kāljāni is formed by the combined waters of the Alāikurī and Dimā, which first take the name of Kāljāni after their junction at Alīpur, the subdivisional head-quarters. The united stream has a course of only a few miles in the Western Duārs, and for a few miles further its right bank marks the boundary between the district of Jalpāigurī and the Cooch Behār State. The Kāljāni proper has no tributaries of any importance on its right or west bank; but on the left or east bank it receives the waters of the Nonāi, Cheko and Gadādhar. The Alāikurī, which supplies the greatest portion of the water to the Kāljāni, is a fairly large river, which rises in the Bhutān hills, and after a southerly and south-easterly course through the Western Duārs, joins the Dimā at Alīpur. Its principal tributaries on the west or right bank are the Gābur Basrā, Burī Basrā and Bāniā rivers and on the east or left bank, the Nimtijhorā and Paror. The Dimā is also a stream of some size, rising in the lower Bhutān hills near Buxā, and flowing south to its confluence with the Alāikurī. Its only tributaries of any importance are the Garm on the right or west bank, and

the Doriā on the left or east. The Alāikurī and Kāljāni rivers mark the boundary between *parganās* Chakwakheti and Buxā.

In recent years the Kāljāni has been cutting away its bank on the Alīpur side, and threatening the civil station; some spurs were constructed by the Public Works Department in the hope of turning the stream but these have been entirely washed away, and if the river continues in the same direction, the question of removing the head-quarters of the Alīpur Duār subdivision will have to be considered.

The Kāljāni is navigable for large boats up to Alīpur and a considerable trade in timber is carried on by means of them.

The next large stream to the east is the Rāidhak, which rises close to mount Chumatarhi in Tibet. It flows southwards through the Western Duārs and enters Cooch Behār below *taluk* Burujkuti. In its northern course through the district the river forms a large island by throwing off a branch stream called the Mainagaon nadi, which leaves the Rāidhak at the point where it enters the district and joins it again about ten miles lower down. The old course of the Rāidhak forms the boundary between the Alīpur and Bhālka tahsils, but in 1905 the river came down in high flood and deserted its former bed which lies to the east of the Rāidhak Tea-garden; it swept across country and poured its waters into several small streams to the west of its former course, one of which the Dharlajhora, is now the main stream and runs to the west of the Rāidhak Tea-garden. The Rāidhak.

The right bank of the Sankos river is the boundary of the district and, before the partition, marked the boundary between the provinces of Bengal and Assam. Its principal tributary on its right or west bank is the Glentāni. Both the Rāidhak and Sankos flow into the Brāhmaputra, a few miles below Dhubri. The Sankos.

With the exception of the Buxā hills, the district is covered by alluvial deposits consisting of coarse gravels near the hills, sandy clay and sand along the course of the rivers, and fine sand consolidating into clay in the flatter parts of the river plain. The Buxā hills are composed of a series of beds, named after Buxā, which consist of variegated slates, quartzites and dolomites, and are fringed on the south by low hills of upper tertiary strata. Limestone occurs in considerable quantities in the Buxā hills and masses of calcareous tufa are found along their base. Copper ore occurs in greenish slate with quartzose layers to the west of Buxā and a mine used to be worked by Nepālis at Chunābāti about two miles away but was abandoned as it did not pay. Copper ores are also found four miles north of Sām Sing Tea Estate, close to the boundary between the Jalpāigurī and Darjeeling districts. Building stone of good quality can be procured in the Buxā hills. There is a mineral spring near Buxā, about three miles from Tashigāon, where Bhutiās suffering from skin diseases go and bathe. GEOLOGY.

BOTANY. In the permanently settled portion of the district and in th south of the Duārs, there is not much tree vegetation except in the Bāikanthpur forest. The numerous hamlets are surrounded by thickets of trees and shrubs, partly planted and partly of spontaneous growth, in which mango, jack, pipal and tamarind trees frequently occur; bamboos thrive luxuriantly and the numerous clumps of these form a conspicuous feature in the landscape and add greatly to its beauty. The red cotton tree or simul (*Bombax malabaricum*) is common and the graceful betel-nut palms are to be seen in almost every village. Along the north of the Duārs are large tracts of reserved forest of which a description is given further on; these decline southwards into plains of heavy grass jungle but in the last ten years much of this has disappeared, and the land is now under cultivation. Many varieties of orchids are to be found in the forests and a curious creeper, the Pāni lahrā (*Vitis repanda*), from the stem of which cold sweet water can be obtained, climbs in and out round the tree trunks.

FAUNA. The Jalpāigurī district has always been famous for its big game and, though the heavy grass and reed jungle which is the favourite resort of wild animals is steadily diminishing owing to the extension of cultivation, the sanctuary afforded by the numerous reserved forests will prevent game from being killed out and the district will always afford good sport.

Among the larger carnivora are the tiger (*Felis tigris*), the leopard (*Felis pardus*) and the clouded leopard (*Felis diardi*). The tiger is found all over the Western Duārs, in the neighbourhood of the forests; the most famous shooting-ground is on the east bank of the Jaldhākā river opposite Rāmshāi Hāt where Lord Curzon shot several tigers in 1904. Tigers are also occasionally seen west of the Tīsta and one was shot in 1907 in a small patch of scrub jungle about four miles from Jalpāigurī, not far from the southern extremity of the Bāikanthpur forest. Man-eaters are almost unknown; in the few cases in which human beings have been killed by tigers, the corpses were left untouched; game and cattle are so numerous in the district that tigers are not driven to eat human flesh. The largest tiger, which has been shot in the Western Duārs, measured 10′ 2″. Leopards are common all over the district, any small patch of scrub jungle gives them cover and they do much harm to the villagers by carrying off their cows, goats, pigs and dogs; they are far bolder than tigers and attack with less provocation. On one occasion the Assistant Manager of a tea-garden was riding a bicycle along a well frequented road, when, from a patch of jungle close to the tea, a leopard sprang on him, knocked him off his machine, and clawed him badly. On another, a Mech, cutting firewood in the jungle was attacked by a leopard, which he killed with his dāo after a hard struggle; he was brought into the

hospital at Alīpur Duār very badly mauled about the head but recovered after some months. The clouded leopard is very rare and is found only in the Buxā hills. A black leopard was shot about five miles from Jalpāigurī in 1906 by the Superintendent of Police. The leopard cat (*Felis bengalensis*) and the jungle cat (*Felis chaus*) are common, as are also the larger civet cat (*Viverra zibetha*) and the smaller civet cat (*Viverra malaccensis*). The genus Canis is represented by the jackal (*Canis aureus*) and the genus Cyon by the wild dog (*Cyon rutilans*). Wild dogs are seldom met with and no report of damage done by them has been received in recent years. The only representative of the genus Vulpis is the Indian fox (*Vulpis bengalensis*).

The order Ungulata comprises the elephant (*Elephas indicus*), the wild pig (*Sus indicus*) and various Ruminantia including the rhinoceros, bison, wild buffalo, and many kinds of deer. Elephants are found in considerable numbers throughout the forests and appear to have increased in recent years; they come down from the hills in large numbers about the time when the rains break in June and again in November when the rice crops are ripening, on which occasions they do considerable damage. Solitary males, both tuskers and muknas, are a serious menace to life in the tracts through which they roam, and no less than five have been proclaimed in the last two years. One of these, a tusker, appeared at Madāri Hāt in March 1905; he pulled down several houses, charged the engine-shed, making a large hole in the masonry wall, damaged a first-class carriage standing in the railway station, and injured several people. He was next heard of at the Hantapārā Tea-garden where he killed a woman, after which he disappeared and was at last shot in December 1907 by the Assistant Manager of the Chuapārā Tea-garden, where he had chased the coolies from their work. On the road through the forest to Buxā, it was found impossible to use telegraph posts as the elephants pulled them down as fast as they were put up, and the wire is now attached to large trees. The Manager of the Bengal-Duārs Railway also complained of telegraph posts along the line through the forest between Latigurī and Rāmshāi Hāt stations having been pulled down by elephants. The wild pig is common throughout the district and its flesh is eaten by Rājbansis, Meches, Gāros and Nepālis. Rhinoceros, buffalo and bison were in danger of being shot out, and, to prevent their extinction, they are now protected in the reserved forests. The *Rhinoceros indicus*, *Rhinoceros sondaicus* and *Rhinoceros malayan* are all found in the district; the last named is very rare but has been shot in the Dalgāon forest. The *Rhinoceros indicus* appears to be increasing and I have myself seen over twenty fresh rhinoceros beds while shooting in a grass jungle north of Silitorsā. Buffalo are not numerous but bison (*Bos gaurus* and *Bos frontalis*) are found from time to time. Of the deer tribe, the

sambhar (*Rusa aristotelis*) is often seen in the forest, hog deer (*Axis porcinus*), swamp deer (*Rucernus devaucellii*) and barking deer (*Cervulus aureus*) are still common in the district though their numbers are decreasing as cultivation extends. A few spotted deer or chital (*Axis maculatus*) are still to be found in the forests to the north of the Alīpur and Bhālka tahsīls.

The Ursidæ are represented by the Himālayan black bear (*Ursus tibetanus*) and the common Indian sloth-bear (*Ursus labiatus*). The Himalayan black bear is fierce and readily attacks without provocation anyone who gets in its way; it is not uncommon to hear of villagers being killed by this bear and in Mech villages men may often be seen who have been mauled badly. Mr. Ainslie, the Subdivisional Officer of Alīpur Duār, who has shot several, told me that he has never seen a tiger fight so hard as one of these did; it charged the beating elephants, seized one of them by the hind leg, and went on charging and fighting till it was killed. Other mammalia found in the district are the common Indian hare (*Lepus ruficaudatus*), the hispid hare (*Lepus hispidus*) which is very rare, monkeys, squirrels, otters, porcupines and several of the smaller rodents.

The following is a list of the larger wild animals found in Jalpāigurī district:—

The tiger (*Felix tigris*).
The leopard (*Felix pardus*).
The clouded leopard (*Felix diardi*).
The leopard cat (*Felix bengalensis*).
The jungle cat (*Felix chaus*).
The larger civet cat (*Viverra zibetha*).
The smaller civet cat (*Viverra malaccensis*).
The jackal (*Canis aureus*).
The wild dog (*Cyon rutilans*).
The Indian fox (*Vulpis bengalensis*).
The elephant (*Elephas indicus*).
The wild pig (*Sus indicus*).
The Rhinoceros (*Rhinoceros indicus*).
(*Rhinoceros sardaicus*).
(*Rhinoceros malayan*).
The wild buffalo.
The bison (*Bos gaurus*).
(*Bos frontalis*).
The sambhar (*Rusa aristotelis*).
The swamp deer (*Rucernus Devaucellii*).
The hog deer (*Axis porcinus*).
The barking deer (*Cervulus aureus*).
The spotted deer or chital (*Axis maculatus*).
The Himalayan black bear (*Ursvs tibetanus*).
The common Indian sloth bear (*Ursus labiatus*).
The hispid hare (*Lepu shispidus*).

The Bengal monkey (*Macacus rhesus*).
The black squirrel (*Sciurus giganteus*).
The grey squirrel (*Sciurus Lokriah*).
The common Indian squirrel (*Sciurus palmarum*).
The Indian Porcupine (*Hysterix lencura*).
The otter (*Lutia nair*).

Game birds. Game birds used to abound in the Western Duārs but many species are getting scarce as the grass lands are being brought under cultivation. The Indian pea-fowl (*Pavo cristatus*) is still common particularly in the jungles east of the Jaldhākā and Torsā rivers; the Indian bustard (*Euphoditis eduardsi*) and the floriken (*Sypheotis bengalensis*) are becoming scarcer, but are still fairly numerous in the cold weather in grass jungle on high land; the lesser floriken or likh (*Sypheotis aurita*) is also met with. The Kalij pheasant (*Gennaeus leucomelanus*) is common in the forest north of the Meenglas tea-garden and the Moonal pheasant (*Lophophorus impeyanus*) may be found occasionally in the Sinchula hills near Buxā. Partridge were common everywhere, but many of the best shooting grounds have been brought under cultivation in recent years and there are nothing like so many as there used to be. The black partridge (*Francolinus vulgaris*), the swamp partridge (*Ortygornis gularis*) and the grey patridge (*Ortygornis ponticeriana*) are still fairly common and the hill partridge (*Arboricola torqueola*) is found in the hills near Buxā. The red jungle fowl (*Gallus ferrugineus*) may be seen feeding in the early morning and at sunset on the edges of the forests. The green pigeon (*Crocopus phœnicopterus*) is common all over the district and the Imperial pigeon (*Carcophaga sylvatica*) is found in the forests. Snipe, duck and quail are also fairly numerous.

Snakes. Many varieties of snakes are found in the district. The hamadryad or king cobra (*Ophiophagus elaps*) and the python (*Python molurus*) are numerous in the forests of the Western Duārs, where large specimens are occasionally shot. The common cobra (*Naia tripudians*) the karait (*Bungarus cærulia*), the banded karait (*Bungarus fasciatus*), Russell's viper (*Daboia rusellii*), the phursa (*Echis carinata*) and one of the pit vipers (*Trimeresurus carinatus*) are met with throughout the district. The common grass snake and several species of water snakes are also very common.

Fish. The numerous rivers and streams in the district contain many varieties of fish of which the mahseer, rohu and katli are the biggest. Other large species are the chital, boal, kalbaus, karusa, and raicheng. There are very few families who live solely by fishing, but Rājbansis, Muhammadans, Meches, and Nepālis, all catch fish in addition to their other occupations. Illustrations of the principal appliances used for catching fish are given on the next page; the drawings were kindly furnished by Babu Balaram Das Gupta, *tahsildār* of Māinagurī. Meches poison fish

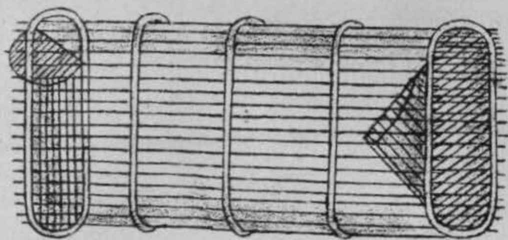
in small rivers and still water; they use a jungle creeper called Ru-gabdi; which they cut into pieces about a foot in length; these pieces are tied into a bundle and well beaten in the water. Mahseer fishing used to be particularly good in the higher reaches of the Jaldhākā, Torsā, Rāidhak and Sankos rivers and big fish are still caught occasionally. The fishing has much deteriorated in recent years, partly owing to persistent netting, but also to dynamiting of the rivers by Nepālis. Dynamite is issued for blasting purposes to contractors working on the hill roads in the Darjeeling district and it is said that the coolies steal some of it and use it or sell it for killing fish. On one occasion the police searched the house of a Nepāli near Dām Dim and found him in possession of five sticks of dynamite and five detonators.

CLIMATE. The seasons in the Jalpāigurī district follow generally the course of those of other districts in the plains but, owing to its proximity to the hills, the rainfall is much heavier and the temperature is rarely excessive. November, December, and January are the driest months, though even in these some rain usually falls; during the last six years, only two months, November and December 1903, have been altogether without rain. In consequence of this heavy and widespread rainfall the district never presents a dried-up appearance but is always green and the growth of vegetation is most luxuriant. The early cold weather months are delightful; the atmosphere is clear and fine and views of the snows are seen; in January and February it is colder and there are often slight mists; by the end of March it begins to get warmer, and is very hot in April, in years when the rainfall is light in that month. In May the average rainfall is about 12 inches and the month is usually comparatively cool; the rains are very heavy in June, July and August, and the atmosphere is saturated with moisture.

Jalpāigurī has an unenviable reputation for fever; in the tract adjoining Dinājpur, a very severe type of malarious fever is prevalent, while in the Western Duārs the dreaded black-water fever claims many victims, and seldom a year passes without several deaths among Europeans from that cause. So serious has the mortality been among the planting community that Government has ordered an enquiry into the reasons why black-water fever is so common in the Western Duārs, and it is hoped to trace the origin of the disease and to find some method of preventing or at least diminishing its ravages. In the ten years ending in 1901, Jalpāigurī figured among the six districts of Bengal with the highest recorded mortality, from fever, in that Province.

Temperature. Temperature is rarely excessive. It is lowest in January when the mean temperature is 62°; by April the mean temperature has risen to 79° and after that it gradually increases till it reaches its highest point 83° in July and August. The mean maximum temperature occurs in April and is 90°; the mean

Fig. 1
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JHOKA

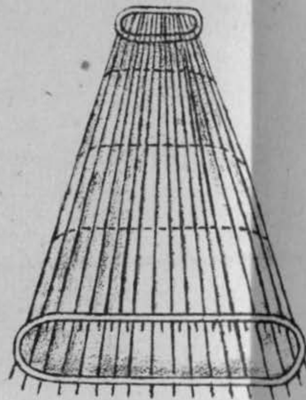


Fig. 3
DHEWLY

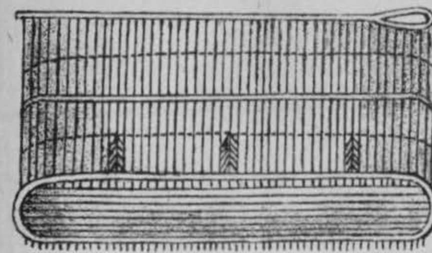


Fig. 4
JAKHOI

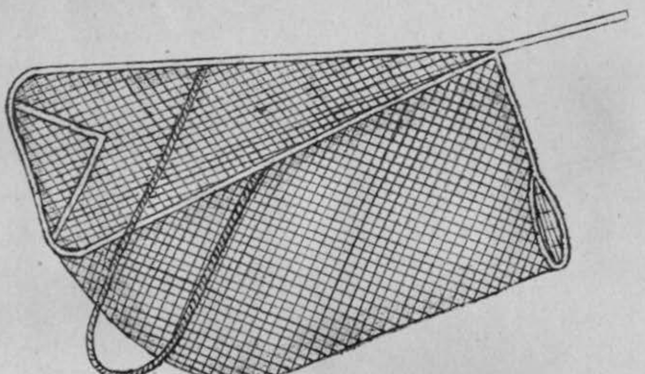


Fig. 5
THORKO

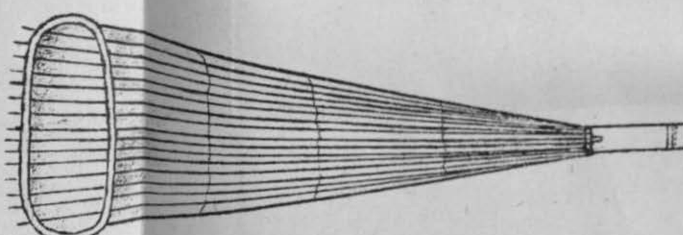


Fig. 6
KOCHA

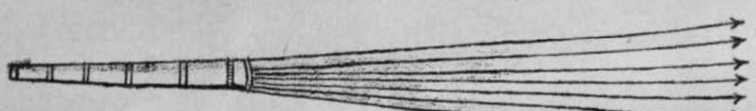
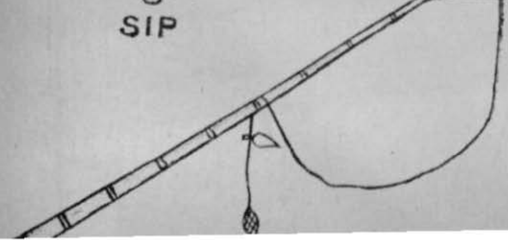


Fig. 7
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Fig. 10
JOLONGA

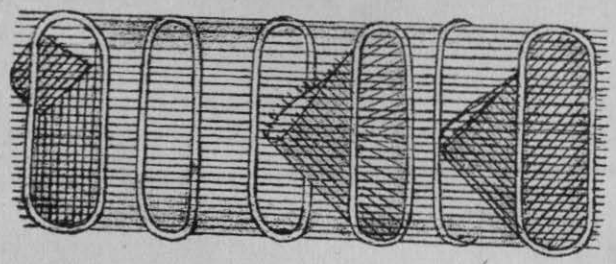


Fig. 11
KATA

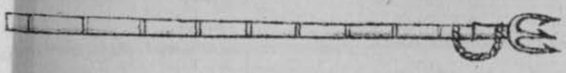


Fig. 12
DHORKA



B. D. Gupta, B.A.,
Tehsildar, Mainagun.
20-7-08.

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minimum is in January and is 51°, so that the mean annual range of temperature is 39°. The highest recorded temperature was 102·5° in 1899 and the lowest 36° in 1887. On the 9th and 10th of February 1905 the lowest recorded temperature at Jalpāigurī town was 39°, but it must have been considerably colder in the Western Duārs; on both dates there were frosts at night and a fine tobacco crop was frost-bitten and nearly ruined.

At Buxā Cantonment the climate is quite different; the rainfall is heavier and even in the hottest weather punkahs are not used and blankets are necessary at night. The tea-garden area to the north of the district is generally cooler than the regulation tracts west of the Tīsta river.

Rainfall. The heaviest rainfall in the Jalpāigurī district is at the foot of the hills, and the lowest in the south on the borders of Rangpur. The town of Jalpāigurī occupies a position intermediate between the two, and though it has a heavier rainfall than Darjeeling, the fall is much less than in the north of the Western Duārs. Rain falls in almost every month of the year; it is lightest in the cold weather months, rather more heavy in March, and increases considerably in April. May may almost be considered a rainy month and precipitation is often very heavy. From June to September rainfall is general; the mónsoon current flows northwards and is deflected towards the west in Northern Bengal so that the prevailing direction of the wind at Jalpāigurī during the rains is east or south-east. During this period the rainfall at Jalpāigurī is 119·41 inches, at Alīpur Duār 122·66, at Buxā Cantonment 176·76 and at the Sām Sing tea-garden, about 1,500 feet above sea-level, 184·55 inches. In the south at Debiganj, the average is only 69·65. The highest recorded rainfall was 249·92 inches at Buxā in 1903; in August 1905 at the same place no less than 94·58 inches of rain fell. The driest year at Jalpāigurī was 1900, when the rainfall was only 84 inches. Statistics of the rainfall at the recording stations of Jalpāigurī, Debiganj, Patharjhorā, a garden close to the hills on the Darjeeling boundary, Sām Sing, Alīpur Duār and Buxā are given below; the figures are the averages recorded during the five years from 1903-04 to 1907-08 :—

Station.	November to February.	March to May.	June to October.	Annual Average.
Jalpāigurī ...	2·20	17·74	119·41	139·35
Debiganj ...	1·24	10·46	69·65	81·35
Patharjhorā ...	3·22	27·80	171·92	202·94
Sām Sing ...	5·31	35·33	184·55	225·19
Alīpur Duār ...	1·38	16·70	122·66	140·74
Buxā ...	4·22	25·68	176·76	206·66

CHAPTER II.

HISTORY.

PREHISTORIC TIMES.

In prehistoric times the Jalpāigurī district formed part of the kingdom of Prāgyotisha, or, as it was afterwards called, Kāmrūp, which extended as far west as the Karātoyā river. The third of the Assam kings, mentioned in the Jogini Tantra, the first of whom flourished in the first century A.D., was Jalpeshwar. According to one legend the Jalpes linga appeared first in his time and he built a temple on the site of the present temple at Jalpes. The next king mentioned by tradition is Prithu Rājā, the extensive remains of whose capital may still be seen at Bhītargarh, south of the road from Jalpāigurī to Titālya. After him we hear of a prince named Dharma Pāl, who is said to have ruled West Kāmrūp up to the Brāhmaputra; traces of his rule can still be found in the Cooch Behār State. There was then a change of dynasty; the three kings of the new house were Nilādhwāj, Chakradhwāj and Nilāmbar, the first of whom founded Kamātāpur, the ruins of which are still to be found in Cooch Behār. This dynasty fell before an invasion by Husain Shāh, the Afghan Governor of Bengal, who ruled from 1497—1521 A.D. Husain Shāh subsequently undertook an expedition into Assam with disastrous results and his failure was followed by an incursion of the wild hill tribes, the most prominent of whom were the Koch.

THE KOCHES.

In the 16th century the Koches under Visu Singh, the ancestor of the present rulers of Cooch Behār, founded an empire which extended from Darrang in the upper valley of the Brāhmaputra to the boundary of the Purnea district. The Koch kingdom did not last long, but is represented at the present time by the Cooch Behār State and two large *zamindāris*, the Chaklajāt estates, belonging to His Highness the Mahārājā of Cooch Behār, and the Bāikanthpur estate, which between them cover nearly the whole of the permanently settled portion of the Jalpāigurī district. The Rāikats of Bāikanthpur are a collateral branch of the Cooch Behār family, and they, themselves, claim to be the senior branch; the family tradition is that one of the great chiefs, at the time when the Koches were rising into power, was named Hajo. He had two daughters, Jira and Hira; Hira gave birth to two sons, the elder of whom Sisu was the founder of the Rāikat family, while the younger Visu is the ancestor of the Mahārājā of Cooch Behār. Sisu became his brother's prime minister and commander of his army; he obtained from him the whole of the Bāikanthpur *parganā*, which was wrested from the king of Gaur, and after his death, the Rāikats became more and more powerful until, in the

reign of Rājā Bir Narain (1621—1625), they ceased to be tributary to Cooch Behār. About 1680 they acted as protectors of the Cooch Behār State and for the time being completely overshadowed it. In 1687 they agreed to pay tribute to the Subha of Bengal and eventually became *zamindārs* under the East India Company. The big Koch kingdom soon fell into decay; the Mughals were rapidly extending their power eastwards, and in 1603 conquered and annexed nearly the whole of the territory of the Koch kings. A desperate struggle took place for the possession of *parganās* Pātgrām and Bodā until, at the beginning of the 18th century, they were nominally ceded to the Muhammadans, though they were farmed out to a cousin of the Cooch Behār Rājā, who held them on his behalf. Under the Mughal rule, these conquests were included in the frontier Faujdāri of Fakirkundi or Rangpur and were transferred to the East India Company with the cession of the *diwāni* in 1765.

THE BEGINNING OF BRITISH RULE.

Until 1869 when the district of Jalpāigurī was formed, this area, comprising *parganās* Bāikanthpur, Bodā, and Pātgrām, was administered as part of the Rangpur district, a frontier tract bordering on Nepāl, Bhutān and Cooch Behār. The Muhammadan practice of farming out the land revenue to contractors was continued until in 1783 the exactions of a notorious farmer, Rājā Debi Singh of Dinājpur, ended in the open rebellion of the cultivators. The enormous area committed to his charge and the weakness of the administrative staff made it impossible for the Collector to assert his authority in the remote corners of his district which became the Alsatia of banditti whom he could not suppress. A small British force sent against them was checked and the leader of another party, Captain Thomas, was cut off; in the end four battalions had to be employed. In 1789 these predatory bands were broken up; the Collector conducted a regular campaign against them, and succeeded in blockading them in the great Bāikanthpur forest with a force of 200 *barkandāzes*. They were compelled to surrender, and in a single year, no less than 549 robbers were brought to trial.

THE BHUTIAS.

Meanwhile the Duārs, or strip of country running along the base of the hills, had passed into the possession of the Bhutiās, who controlled the whole tract, from the frontier of Sikkim as far east as Darrang, and frequently enforced claims of suzerainty over the enfeebled State of Cooch Behār. They did not occupy the country permanently, probably because Bhutiās cannot stand the heat of the plains, but exacted a heavy tribute and subjected the unfortunate inhabitants to the cruelest treatment. Bhutān belonged to a tribe whom the present Bhutiās call Tephus and who are supposed to have been the ancestors of the people of Cooch Behār. More than 200 years ago, some Tibetan soldiers are said to have conquered the Tephus and taken permanent possession of their country.

The present ruler of Bhutān is His Highness Sir Ugyen Wangchuk, K.C.I.E., Mahārājā of Bhutān and Tongsa Penlop; his former title was Ku-Sho Chö-Tsi-pa (lit: the honourable calculator of religious affairs). He was elected hereditary ruler of Bhutān on the 17th December 1907 on which occasion the Government of India sent a British Mission to Bhutān. Before the rise of the Tongsa Penlop to the supreme power, the country was nominally governed by the Dharma and Deb Rājās. The Dharma Rājā is believed to be the re-incarnation of Dup-gein Shap-trung, the first Dharma Rājā. "Dharma Rājā" is an English and Indian term, the Bhutiā and Tibetan name being Shap-trung Rim-poche (lit: the precious servant). He was originally not only the spiritual but in theory also the secular head of the state; but one of his successors, considering that temporal and spiritual powers were incompatible, confined himself entirely to the latter and appointed a minister to wield the former. The minister by degrees became the temporal ruler of Bhutān and was styled De-Ba (Deb Rājā) and De-Si, both of which terms mean "Administrator of a country."

During the interval between the death of the Dharma Rājā and his re-appearance, or rather until he had arrived at years of discretion after his last birth, the office was held by a spiritual chief called Lama Te-pu. The Lama Te-pu is head of the Lamas, and was allowed a perpetual regency through his *avatars*, during the periodical disappearance from the world of the Dharma Rājā. The Deb Rājā was in theory elected by the Council and held his office for three years; at one time he had a certain amount of power, but latterly was merely a puppet, the nominee of the most powerful Penlop or Jongpen for the time being. For about the last 50 years the Penlops of Tongsa have had the greatest influence in the nomination of the Deb Rājā. The Deb Rājā was supposed to be assisted by a Council called the Lönchen, composed of the following members:—

(1) The Lam Zim-pön, Chief Secretary to the Dharma Rājā;
(2) Deo-nyer Zim-pön, Private Secretary to the Deb Rājā;
(3) Tim-bu Jong-pen, Governor of Tra-shi Chö-dzong;
(4) Punakha Jong-pen, Governor of Punakha;
(5) Angdupotang Jong-pen, Governor of Angdupotang;
(6) Deb Zim-pön, Chief Secretary to the Deb Rājā;
(7) Shung Dro-nyer, Master of the Household.

In addition to these, there were three extraordinary members who attended the Council when they happened to be present at the capital and who were liable to be called on to attend in cases of emergency; their collective title was the Chen-lah. They were—the Tongsa Penlop, the Paro Penlop, and the Taka Penlop. In the summer the seat of Government was in Tra-shi Chö-dzong, and in the winter at Punakha.

What rule existed was in the hands of the Penlops of Tongsa Paro, and Taka; since the cession of the Duārs the importance of the Taka Penlop has diminished and he is now a very insignificant officer. About 50 years ago, Deb Na-Ga, the father of the present ruler, gained the ascendency and consolidated the power of his family over the other Penlops. This power his son, Mahārājā Ugyen Wangchuk, has upheld.

Until 1905 our political relations with Bhutān were controlled by the Bengal Government through the Commissioner of the Rājshāhi division. During the Tibet Mission they were placed in charge of the British Commissioner, Colonel (now Sir Francis) Younghusband, directly under the Government of India, and since the 9th June 1905 the Political Officer in Sikkim has been in political charge of Bhutān in addition to Sikkim and Tibet and is directly under the control of the Government of India.*

The British Government first came into contact with Bhutān in 1772. The Bhutiās invaded the Cooch Behār State and, on its Rājā applying for help, a force was sent to his assistance which drove out the invaders and pursued them into their own territories. Through the intercession of the Regent of Tibet, a treaty of peace between the East India Company and Bhutān was concluded in 1774. A few years later in 1783 an attempt was made to promote commercial intercourse with Bhutān, but Captain Turner's mission to that State proved unsuccessful. After this there was little intercourse until the occupation of Assam by the English in 1826. It was then found that the Bhutiās had seized several tracts of country lying at the foot of the mountains, called the Duārs or passes. They agreed to pay a small tribute, but failed to do so and used their command of the passes to raid into British territory. In consequence of this Captain Pemberton was sent to Bhutān, but his negotiations yielded no definite result and, as all attempts to obtain redress and ensure security to the inhabitants failed, the Assam or Eastern Duārs were wrested from the Bhutiās, and the British Government agreed to pay them Rs. 10,000 a year as compensation for the loss, subject to their good behaviour. No improvement resulted; the Bhutiās continued to commit outrages on British subjects in the Duārs, and scarcely a year passed without the occurrence of several raids on British territory, headed by Bhutiā officials, in which the inhabitants were plundered, killed or carried off as slaves. The following description of the Bhutān war and the annexation of the Duārs is taken from the official account published in the "Summary of Affairs in the Foreign Department of the Government of India, from 1864 to 1869":—

The Bhutān War.

'In the cold weather of 1863, Mr. Ashley Eden, C.S., was sent as an envoy to Bhutān, to put a stop to these depredations

* For the above account of Bhutān, I am indebted to Mr. C. A. Bell, I.C.S., Political Officer in Sikkim.

and outrages and to demand reparation. In April 1864, Mr. Eden returned from Bhutān and reported the ill-success of his mission. He had failed to obtain from the Government of Bhutān either satisfaction for past injuries or security for the future. He had been subjected to gross insults, and obliged by force to sign two papers, agreeing to make over the Assam and Bengal Duārs to Bhutān, and to surrender all run-away slaves and political offenders. It appeared that the Deb and Dharam Rājās were in reality mere puppets, and that the chief power in the State had been usurped by the Tongsa Penlop; and that it was the Tongsa Penlop and his faction who had treated the envoy with indignity. On Mr. Eden's return, the Government at once disavowed the treaty which he had been forced to sign, suspended all communications with the Bhutān Government, and strengthened the police force on the frontier. In June, the Government addressed letters to the Deb and Dharam Rājās, announcing the permanent annexation of the district of Ambāri Fālākātā (the Bengal Duārs), and declaring that the annual payments previously made by the British Government to Bhutān, of Rs. 2,000 as rent for Ambāri Fālākātā, and of Rs. 10,000 as revenue from the Assam Duārs, had ceased for ever. The letters demanded also the release of all British subjects, as well as subjects of Cooch Behār and Sikkim, numbering in all, it was said, more than 300 persons, who had been detained in Bhutān against their will; and the restoration of all property which had been carried off from British territory, or Cooch Behār or Sikkim, within the previous five years. The letters concluded by stating that, unless these demands were fully met by the commencement of the ensuing September, further measures would be taken to enforce them. To these demands, the Deb Rājā in whose name all official communications from the Bhutān Government were usually made, sent no reply whatever. In August, however, a letter was received from the Dharam Rājā, offering no apologies for the gross insults offered to the envoy, and altogether ignoring the Government's threat of coercion, but proposing to receive a fresh envoy or to send one himself. This proposition was considered to be out of the question. If the Dharam Rājā had manifested any intention of liberating the captives or of restoring the plundered property, the proposal to receive an envoy from Bhutān might have been entertained, but as it was, the action of the Bhutān authorities left no option to the British Government but to enforce its demands, and to compel the Bhutiās to respect the frontier for the future.

'Accordingly, it was resolved to carry out the permanent annexation of the Bengal Duārs, amounting to an advance northward for a distance of from twenty to thirty miles along a line of about a hundred and eighty miles in length, so as to command all the passes into the plains; and at the same time to confine our

occupation to a tract of country which was peopled by a race which had no affinity with the Bhutiās and had long suffered from their tyranny, but who were closely allied with the people of Bengal, and were expected to co-operate cordially with the British authorities. On the 12th November 1864, Government issued a proclamation permanently annexing the Bengal Duārs; and it was determined that an expedition should advance in four columns, which were to take up their several posts at Diwāngirī, Sidli, Pasakhā, and Dālingkot. Instructions were also issued that no overtures from the Bhutān Government were to be taken into consideration except upon the following basis :—

(1) That the Bhutān Government surrender all the Bengal Duārs and the hill territory on the left bank of the Tīsta, up to such points on the water-shed lower rangeo f hills as might be laid down by the British Commissioner. (2) That the Bhutiās give up the two documents extorted from Mr. Eden, and send a chief of rank to apologise for the flagrant misconduct towards the envoy. (3) The surrender of all captives still detained in Bhutān against their will. (4) That the Bhutān Government enter into a treaty of friendship and fair dealing for the future. In the event of these conditions being accepted, the British Government offered an annual grant of Rs. 25,000 to be hereafter increased, with reference to the prosperity of the tract annexed, up to the sum of Rs. 50,000; but this grant was to depend entirely on the will and pleasure of the British Government, and on the good conduct of the Bhutiās.

'On the 7th December 1864, the four columns made a simultaneous advance; within six weeks they had driven in the Bhutiās with slight loss, and occupied eight or ten of their posts along a frontier of about 180 miles of difficult and jungly heights. Subsequent to these successes, the civil authorities set to work to introduce rule and order into the Duārs, to implant confidence in the minds of the inhabitants, and to arrange generally for the administration of the newly annexed territory. They also concerted measures in communication with the military authorities for establishing a strict blockade of the passes, with the object, by cutting off their supplies, of inducing the Bhutiās to come to terms.

'Meantime in the beginning of 1865, the Bhutiās appear to have resolved on a bold effort to recover the territory they had lost, and to drive the invaders from their country. They suddenly debouched in force along the frontier, threatening the whole line of military posts excepting the western one at Dālingkot. On the 4th February 1865, the Bhutiās so far succeeded in their design as to capture the eastern post at Dīwangirī. This was the more surprising as the garrison at Dīwangirī had expelled a far more formidable attack which had been made on the 30th January. However, on the second occasion, the garrison abandoned its

position with the loss of two mountain guns; its retreat was almost entirely unmolested by the enemy. At one other post, Tājāgāon, which was apparently untenable, the commanding officer found it necessary to retire, and did so in perfect order. At all the other posts the garrisons held their own, although threatened in force by the Bhutiās. On the 15th March, General Tytler re-occupied the position at Tājāgāon, and on the 2nd April General Tombs re-captured Dīwangirī. With these two affairs all active operations ceased. The Bhutiās lost heart, and made no further efforts to regain their ground, or to molest the force which had taken possession of the Duārs and their forts. Active hostilities were brought to a close by the setting in of the rains and the Bhutān authorities evinced an earnest inclination to come to terms. They were invariably referred to the conditions offered them in November 1864, and were told to entertain no hope that any modification would be admitted. They were also warned that, unless they acceded to these terms in their entirety, the British force would enter Bhutān in the ensuing cold weather, and exact its own conditions at Punakha and Tongsa, the Bhutiā capitals. At the same time, preparations were actively pushed forward on a sufficient scale for the despatch of two columns into the heart of Bhutān, one to start from Buxā, and the other from Dīwangirī; and the construction of roads into Bhutān territory was conducted with considerable energy. The Bhutān authorities were soon convinced, by the reality of these preparations, that the Government of India was in earnest, and they accepted the terms which had been offered them, with the additional stipulation that the two guns which had been abandoned in the retreat from Dīwangirī, and which were then in the possession of the Tongsa Penlop, should be restored to the British Government. A treaty of peace on these terms was accordingly concluded on the 11th November 1865; and it was fairly anticipated that the material guarantee for the good conduct of the Bhutiā chiefs which the Government possessed in the shape of withholding payment, either altogether or in part, of the annual grant, would secure the peace of the border and generally put a stop to the raids and scenes of rapine which were of such frequent occurrence in former years.'

These expectations have been fully realised; since that time the peaceful relations between the British Government and Bhutān have been undisturbed. The annexed tracts, known as the Duārs, have steadily increased in prosperity; tea-gardens cover the country south of the hills, the cultivators are well to do, and probably in no district in India is cultivation extending faster, while the reserved forests pay a yearly increasing revenue to Government. Bhutān itself is settling down under the rule of the Tongsa Penlop and local chiefs and *kazis* are being brought under control and have no longer the power to do mischief which they possessed in former years.

The Jalpāigurī district is of comparatively recent creation and was formed in 1869. After the annexation of the Duārs in November 1864, they were divided into the Eastern and Western Duārs, the former of which now forms part of the district of Goālpārā. The Western Duārs was divided into three *tahsīls*, *viz* :—the Sadar, comprising the tract of country between the Tīsta and Torsā rivers with its head-quarters at Māinaguri; the Buxā *tahsīl* extending from the Torsā to the Sankos river, with its head-quarters at Alīpur; and the Dālingkot *tahsīl*, which includes the mountainous part of the annexed territory. Mr. F. A. Donough, Assistant Commissioner, was deputed to Māinagurī for criminal and civil work and was succeeded, after a few months, by Mr. J. Tweedie, who was appointed in 1866 the first Deputy Commissioner of the Western Duārs. Mr. Donough then went to Buxā as Civil Officer and was succeeded in 1867 by Colonel Hedāyat Alī Khān. In 1867-68 Buxā was formed into a regular subdivision. In January 1867 the Dālingkot *tahsīl* was transferred to the Darjeeling district and at the same time the criminal jurisdiction of the Titālya subdivision of Rangpur, comprising the police circles of Bodā, Sanyāsikātā (now Rājganj) and Fakirganj (now Jalpāigurī), was made over to the Deputy Commissioner of the Western Duārs, the civil and revenue jurisdiction remaining with Rangpur. This arrangement lasted until January 1st, 1869, when the Titālya subdivision was separated completely from Rangpur (with the exception of the civil jurisdiction) and was united to the Western Duārs to form the district of Jalpāigurī. The Deputy Commissioner removed his headquarters from Māinagurī to Jalpāigurī town, on the west bank of the Tīsta, and the district was divided into two subdivisions—the Sadar, which included the former Titālya subdivision and that part of the Western Duārs, which lies between the Tīsta and the Jaldhākā rivers; and the Fālākātā subdivision which comprised the rest of the Buxā subdivision, the headquarters of the Subdivisional Officer being removed from Buxā to Fālākātā. The headquarters of this subdivision were again transferred to Alīpur in 1876. On April 1st, 1870, the civil jurisdiction of the Titālyā subdivision was vested in Jalpāigurī and the Pātgrām police circle was transferred to the Fālākātā subdivision. In 1874-75 Pātgrām was attached to the Sadar subdivision, and, since this change, the Jalpāigurī district has remained unaltered.

BRITISH RULE.

ARCHÆOLOGY.

The only remains of antiquarian interest in the Jalpāigurī district are the fort at Bhitargarh and the Jalpes temple.

Bhītargarh.

Bhītargarh was the capital of Prithu Rājā and was situated partly in Rājganj and partly in Bodā. A large tank still exists, but is much silted up and the outlines of the city may still be traced. Dr. Buchanan-Hamilton wrote the following description of it as it was when he saw it about the year 1809:—

'The city consists of four concentric enclosures. The innermost is said to have been the abode of the Rājā and appearances

justify the supposition. It is a parallelogram of about 690 yards from north to south, by half as much from east to west; but at the north end a small portion is cut from its east side, in order to secure the place by an earthen rampart from any attack that might be made from a large tank that is adjacent. The defence of the other parts of the royal residence has been a brick wall. Near the middle of the area is a small tank, with a heap of bricks at each end. In the south-east corner is another tank, and one heap. In the south-west corner are two heaps containing bricks. All these heaps are small, and have probably been private places of worship; and all the other buildings were probably thatched. There is not the smallest trace of either taste, or magnificence; while the defences seem to indicate that the Government of the Rājā was insecure.

'The tank adjacent to the citadel or palace is a considerable work; and from the great height and wideness of the banks thrown out, must be deep. It extends about 800 yards from north to south, and 700 from east to west. In the north and south ends it has two *ghats* or descents, and in the east and west sides it has three, all paved with brick. The water is still clear, and owing probably to the bottom being sand, but attributed to the holiness of the place, few weeds grow in it. The part of the bank that adjoins the palace is overgrown with trees and bushes, and is supposed to be the abode of the spirit of Prithu; for on the approach of the impure Kichoks (a gipsy tribe), it was here that he precipitated himself into the water. A flag is hoisted to denote that the ground is holy; and, on approaching my guides bowed to the ground, and called upon Mahārājā Prithu by name.

'The inner city, which surrounds the palace and great tank, is about 1,930 yards from east to west, and 345 from north to south. Where I passed the north-east and west faces they consisted of a brick rampart, and a narrow ditch without any flanking defences, and extremely ruinous; still, however, in some parts, the bricks of the facing retain their position. Where I crossed the southern face it consisted of a very wide ditch and strong rampart of earth. The citadel is not in the centre of this inner city, but it is placed nearest to the north and west sides.

'The middle city extends about 3,530 yards from east to west, and 6,350 from north to south, and is surrounded by a ditch and rampart of earth; but its north face, where the Tālmā enters its ditch, and flows along it so far as I traced, is strengthened by an additional rampart. Its western area is wider than its eastern, and its southern area is not so wide as that on the north. Near its southern end is a tank called Vaghpukhori where the Rājā kept some tigers. In the northern area are shown two small heaps of bricks, which are called the house of the Rājā's minister, and from their size could only have served as the private place of worship of such a personage. In both the inner and middle cities

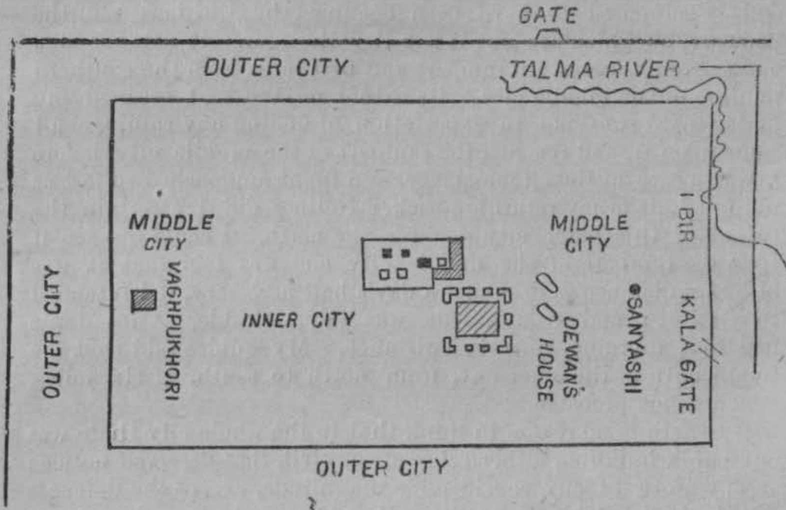
there have been subdivisions, separated by ramparts and ditches, both running parallel to the chief defences of the place, and cutting the former at right angles, and which probably divided the city into many quarters.

'The outer city is surrounded by a low rampart and ditch, and is supposed to have been occupied by the lowest of the populace, on which account it is called Harirgor. It extends 300 yards from the western rampart and 570 yards from the southern rampart of the middle city. Its extent on the east escaped my notice, as I was not in expectation of finding any ruin, when I came upon it, and reached the rampart of the middle city before I was aware of the circumstance, and night approached so fast as not to admit of my returning back. Neither did I ascertain the extent of this outer city towards the north. I could not see it from the rampart of the middle city and was told that it was at such a distance as to render a day's halt necessary, if I intended to view it; and a day's halt was impracticable, as my tents had that morning gone to a distance. My guides said that the total length of the outer fort, from north to south, is six miles, which seems probable.

'There is no reason to think that in the whole city there was any public building, either religious or civil, that deserved notice; or any work of any considerable magnitude, except the defences and the tank. This shows either that the people were in a very rude state of society, or that the urgency of the state required its whole means to be exhausted on its defence. The whole seems to have been early constructed before the art of war had made any considerable progress, as there is nothing like towers, bastions or any part that can defend another; but that does not indicate a great antiquity, as Komotapoor, destroyed at the end of the 15th or beginning of the 16th century, is in a similar state. For one appearance which I observed in all the sides of the outer city, I cannot account. There are several trenches of inconsiderable depth, and perhaps 20 feet wide, which seem to extend round the whole parallel to the ditch of the middle city, and distant from each other about 40 or 50 feet. The earth that has been taken from the trenches, has been thrown on these intermediate spaces, which although evidently raised are level. They could therefore scarcely have been intended for defences; nor is it probable that regular streets would have been found in the meanest part of the

city, while no traces of such remain in the parts that were inhabited by persons of rank.'*

SKETCH OF BHITARGARH.



Jalpes temple.

The Jalpes temple is situated about four miles to the south-east of Māinagurī close to the Jhordā river. According to the old legends the *linga* appeared first in the time of Jalpeswar, the third of the Assam kings mentioned in the Jogini Tantra, and he built a temple known as the "Jalpeshwar Mandir." Between his time and that of Prān Narāin, Rājā of Cooch Behār, the temple appears to have been re-built twice, but the story goes that the *linga* was eventually forgotten until Prān Narāin, who ruled about 300 years ago, dreamt that Siva appeared to him and told him that he was at Gortoli and would be found if search was made for him. The Rājā left his palace with a large army and many attendants, and, after a long search, was successful in discovering the Siva *linga*.

He at once ordered a temple to be built on the spot and the present temple was begun. Prān Narāin died before it was finished, but the work was continued by his son Mod Narāin, and finished by his grandson. Prān Narāin employed Muhammadan artists from Delhi, with the result that the temple resembles a mosque in form; it is built of durable bricks and has a high central dome with four smaller domes at each corner. The temple is built on a mound and surrounded by a moat, which is now nearly dry; the floor of the basement is sunk some depth in the

* See Martin's Eastern India, 1838, Volume III, page 443.

mound, and a flight of steps leads down to it. The Siva *linga* is fixed in a hole in this basement, and is at all times more or less covered with water, which has to be baled out before the idol can be worshipped. The building itself is square, and galleries used to run round the base and top of the large dome. The height from the basement, floor to the top of the dome is 92 feet; the lower storey is 78 feet square and the upper stories 38 and 36 feet square. The dome is 17 feet in height and has an outer diameter of 34 feet. During the earthquake of 1897 the temple was much damaged; the large dome fell in and all the outer domes were much damaged. The cement with which the brick walls were covered has disappeared and the walls themselves are being covered with creepers. Forty-six *jots* were granted revenue free by Government for the maintenance of the temple and its worship and the rents derived from them are administered by a committee appointed at Jalpāigurī. Few of the members, however, take any interest in it and, though some attempts have been made to repair the temple and three of the four small domes have been re-built, it seems probable that the temple will soon become a heap of ruins.

CHAPTER III.

THE PEOPLE.

GENERAL STATISTICS.

It has been stated already that the Jalpāigurī district consists of two well defined parts, *viz*:—the permanently settled *parganās* which used to form part of Rangpur, and the Western Duārs which were annexed in 1865 at the time of the Bhutān war. The population of the present district area at the last four censuses is shown in the margin; the remarkable increase of population is confined entirely to the Western Duārs, the phenomenal development of which is the most striking feature in the history of the district.

1872	...	417,855
1881	...	580,570
1891	...	680,736
1901	...	787,380

Early censuses.

The Regulation parganas.

The first attempt to enumerate the people was made in 1858-59, at the time of the Revenue Survey of Rangpur, when a rough census was held and it was found that the population of the permanently settled part of the Jalpāigurī district was 189,067; there is nothing to show how the enumeration was made, and the Deputy Commissioner reported in 1870 that he was of opinion that the estimate was too low. His views were proved to be correct by a census taken in 1871-72. It was found impossible to conduct a simultaneous census and a gradual enumeration was made which lasted throughout the cold weather; great difficulties were experienced owing to the illiterateness of most of the village headmen, who were appointed enumerators, and to the widely scattered hamlets, called by the same name, which together constituted a *mauza*. The work was, however, pushed through and the population was found to be 327,985 inhabiting an area of 1,026 square miles, giving an average density of 320 to the square mile. Between 1872 and 1891 there were various changes of jurisdiction so that the variations in the population cannot be accurately stated; it does not appear that there has been any increase during the last 30 years, but it must be remembered that there is a steady drift of the people into the Western Duārs where the land is fertile and the rates of rent low, and to a less extent into the Silīgurī subdivision of the Darjeeling district.

The Western Duārs.

At the close of the Bhutān war, a survey of the Western Duārs was made in 1865—67, and a rough estimate made by the Survey Officers returned the population at 49,620. It cannot be expected that this census was very accurate, but the country had long suffered from the depredations of the Bhutiās, and it is probable that many of the inhabitants left their homes temporarily during the war. In 1870 the Deputy Commissioner made the

first settlement of the Western Duārs and conducted a special census in connection with it; this showed the population to be 100,111. After making due allowances for errors in the enumeration made in 1865, it is clear that a migration of the people of the neighbouring districts to the fertile waste lands of the Western Duārs began as soon as British rule ensured the safety of life and property. Subsequent censuses showed an even more remarkable increase of population; in 1881 it had increased to 182,687, in 1891 to 296,348 and in 1901 to 410,606. There is every reason to believe that the next census will show an equally large increase and that people will continue to migrate into the Western Duārs until all the available waste land is brought under cultivation. The Māinagurī *tahsīl* has filled up rapidly and there is very little land left for new settlers; during the last ten years the extension of cultivation in the Fālākātā *tahsīl* has been remarkable and in a few years it will be as well peopled as Māinagurī. Even in the eastern *tahsīls* of Alīpur and Bhālka population is increasing fast and cultivation extending in every direction.

GROWTH OF THE POPULATION.

The growth of the population of the Western Duārs is due partly to the rise of the tea industry, and partly to the influx of settlers from other districts and from the Cooch Behār State. Tea was first grown in the district in 1874-75 and since that time the industry has made rapid progress; in 1876-77 there were 13 gardens with an area of 818 acres. By 1882 the number had increased to 60 with 4,670 acres under mature and 3,598 acres under immature plants, and in 1901 the number of gardens was 235 with 76,403 acres under tea, and a total outturn of 31,087,537 pounds. To work these gardens a large amount of labour is required and this led to an enormous immigration of coolies mainly from Chota Nāgpur and the Santhāl Parganas. Rānchi alone has supplied 80,000 labourers, mainly Orāons and Mundas, and the Santhāl Parganās 10,000. In gardens on the slopes of the hills the labour force is mainly composed of Nepālis, but these men will not work on gardens lower down on the plains.

Agricultural Settlers.

Many tea-garden coolies after working for a time and saving a little money settle permanently in the district. Orāons are hard-working and make excellent cultivators; they are good settlers, giving little trouble and paying their rent regularly. Many Nepālis have taken up land and a flourishing settlement of them may be seen at Turturi in the Alīpur *tahsīl;* others own large herds of buffaloes out of which they make much profit. In addition to the ex-tea-garden coolies numbers of people from Rangpur and Cooch Behār have migrated to the Duārs, attracted by the fertile land and low rents.

Europeans

The number of Europeans in the district was 284 in 1901; most of them are employed as Managers or Assistant Managers of tea-gardens.

Cencus of 1901.

As stated above the total population according to the census of 1901 was 787,380, the number of inhabitants of the district having increased by 15·67 per cent since 1891. There was a decrease in every *thānā* in the regulation part of the district due principally to migration to the Western Duārs; Pātgrām on the east of the Tīsta river showing the largest decrease of 5·28 per cent. The population of the Western Duārs showed a large increase which was most marked in the Alīpur Duār subdivision where it was 64·75 per cent.

As might have been expected the increase was least towards the west where the census of 1891 had shown large accessions of population; between 1881 and 1891 the population of the Dām-Dim *thānā* increased by 157·4 per cent, the increase in the period between 1891 and 1901 being only 28·26 per cent, while the Dhupgurī outpost increased by 57·06 per cent, the Fālākātā *thānā* by 57·87 per cent, and the Alīpur *thānā* by 70·01 per cent. Settlers naturally go first to the lands nearest to civilisation and it is only when these are filled up that they go further afield; waste land in the Fālākātā *tahsīl* is eagerly sought after and there is now not much left; settlers are accordingly turning their attention to the more distant lands of the Alīpur and Bhālka *tahsīls* and it may be confidently anticipated that this part of the country will show the largest increase of population at the next census. The climate of the Western Duārs is notoriously bad and malarious fever of a severe type is prevalent; in these circumstances a natural increase of population can hardly be expected and practically the whole of the large increase is due to immigration.

Density of population.

The density of the population for the whole district is 266 to the square mile. In only one *thānā*, Pātgrām, it is over 500, and in only three more, Jalpāigurī, Bodā and Dhupgurī, over 400. As might be expected the population is thinnest towards the east, the density in the Alīpur *thānā* being only 89, although this area showed an increase of over 70 per cent at the census of 1901. The area under reserved forest is, however, 509 square miles, and if the area of the Bāikanthpur forest, 81 square miles, is added, no less than 590 square miles in the district are covered by forest. If the forests are excluded, the density of the population in the remaining area rises to 332.

The excess of males in the district is remarkable; at the last census only 862 females were enumerated for every thousand males. These figures may be explained partly by the large immigration but, even if immigrants and emigrants are excluded from the calculation, the females still only reach 89·4 per cent of the male population. Rājbansis and Musalmans form the largest part of the local population and the figures for these are shown in the margin; these people probably belong to Mongoloid tribes, among which a low proportion of females is always found.

	Male.	Female.
Rājbansis ...	170,646	150,524
Nasyas ...	34,310	29,574
Shekhs ...	85,850	76,645

Mention has been made before of the large immigration into the district. Nearly a quarter of the present inhabitants are foreign born and of these nearly three-quarters have come from a distance. In 1901, 188,223 immigrants were found in the district compared with 143,922 in 1891 and most of them were enumerated in the Western Duārs. The annexed table gives the percentage of foreign born to the total population in each *thānā* in the Western Duārs. About half of the immigrants are tea-garden coolies. The loss by immigration is small; less than 1 per thousand of the population were enumerated in other districts. This seems to show that fewer of the emigrants from Chota Nāgpur and the Santhāl Parganas return home than is usually supposed; the rich lands of the Western Duārs are a great attraction to coolies and many of them settle permanently in the district after working for a few years on the tea-gardens and saving a little money.

Thānā.		Percentage of immigrants.
Māinagurī	...	28
Dām-Dim	...	48
Dhupgurī	...	38
Alipur	...	40
Fālākātā	...	55

Towns and villages.

The only town in the district is Jalpāigurī which has a population of 10,231 souls; the rest of the district is entirely rural. At the census of 1901 the population was divided between the town of Jalpāigurī, the cantonment at Buxā, and 766 villages. The village community can, however, scarcely be said to exist and the country is divided into small hamlets, the most important homestead belonging to a substantial farmer, often the *jotdār*,, while round it are the houses of his relations, under-tenants and farm labourers. The *jot* is the social unit and not the village; the *jotdār*, or, if he is an absentee, the *chukānidār* under him, keeps the little community together; he maintains a store-house from which he makes subsistence loans of rice to his dependents or furnishes them with seed. He has often considerable difficulty in keeping his labourers; the demand for agricultural labour is so great that a man who is dissatisfied with his employer can always get work elsewhere, while there is still plenty of waste land to which any family which has saved some money can migrâte and set up for itself. At the last census the revenue *mauza* was found to have been so completely forgotten that it had to be left out of account altogether and the *taluk* taken in its place.*

In the north of the district the tea-garden industry has given rise to large settlements of labourers, the average population of which is about 3,000 souls; this population is always shifting as coolies, after working for a time on the tea-gardens, take up land and settle down as cultivators or return home with their savings. The places of those who leave the tea-gardens are filled by new immigrants.

* Gait's Census Report, 1901.

RACES OF JALPAIGURI.

In the permanently settled part of the district Rājbansis and Muhammadans form the bulk of the population.

In the Western Duārs, the number of races is extraordinarily numerous, ranging from European planters to Meches and Gāros, who have only recently begun to abandon their nomadic habits and rough system of cultivation by *juming* and to settle down and till the land in the ordinary way. The tea-garden industry has introduced an amazing variety of races among which Orāons and Mundas from Chota Nāgpur and Santhāls are most numerous; many Bengal and some Cooch Behār castes are also met with, while Nepālis form a not inconsiderable section of the population. In addition to these, what may be called the local population is represented by Rājbansis, Muhammadans, and Meches, while in the neighbourhood of Buxā and in places where the district runs into the hills, Bhutiās are found. Bengali clerks and Chinese carpenters are employed on the tea-gardens. Mārwāri merchants exploit the Westerns Duārs as they do many parts of India; always ready to lend money at exhorbitant interest, they manage to get the simple cultivators into their debt and then extract from them the uttermost farthing or seize their land under a decree of the civil court. Cultivators are, however, generally so prosperous and crops are so certain in the Western Duārs that the Mārwāri has never succeeded in getting the hold which he has in other parts of India.

The Rājbansis.

The most numerous race in Jalpāigurī is the Rājbansi or Koch, which numbered 321,170 or more than two-fifths of the total population in 1901. The Koches appeared first in Bengal about the close of the 15th or beginning of the 16th century, when Hajo founded the Koch kingdom on the downfall of the ancient Empire of Kāmrup. During the reign of his grandson Visu, the people became semi-Hinduised and adopted the name of Rājbansi, *i.e.*, of the royal race. They are now recognised as a distinct caste of Hindus, but their religion is very much on the surface and they adhere to many of their ancient customs and superstitions. It has been thought by some writers that the Koches come of a Dravidian stock and were driven out of the valley of the Ganges by the Aryan advance into Bengal; there seems, however, to be little doubt that they are a Mongoloid race and entered Bengal from the east by the valley of the Brāhmaputra.

The Rājbansi women, few of whom have the least pretence to be considered good-looking, leave their heads uncovered and wear a cloth or *sari* reaching only to the knees and bound over the bosom, leaving both shoulders bare, much in the same fashion as the Assamese. Among the Rājbansis, girls are generally married at the age of 12 or 13; the preliminary arrangements are made through a go-between called the *ghatak* or *ghataki* and the price paid for the girl varies between Rs. 40 and Rs. 120 according to her appearance and ability to work. Rājbansis may have as many as 10 wives and often have more than one; widow marriage is allowed. A

danguā is a man who lives with a widow as her husband and is kept by her; he is looked down upon by the Rājbansis and is considered an outcast; the woman can turn him out of her house at any time. So great is the disgust with which he is regarded by his caste-people that it is said that if a cow dies and a *danguā* removes its carcase from the cowshed, even the vultures will not eat it. Another story is that elephants will refuse to eat rice which has been tied up in grass, and offered to them by a *danguā*. A young man who has no parents often works for a wife in the old patriarchal manner; he goes to the house of the girl's parents and lives with them, and after working for them from one to seven years, the girl is given to him for his wife. A man who adopts this method of getting a wife is known as a *ghar-jia*.

Property among the Rājbansis descends from father to son; if there are several sons they share equally; a son excludes a daughter, but if a father, before his death, has given his daughter a share of his property, she can keep what has been given to her. If there are only daughters they take equal shares subject to their mother's life-interest; as long as she is living the daughters cannot take the property. If a widow re-marries, she loses all claim to property left by her husband. In default of children property goes to brothers and then to their sons.

Before leaving the Rājbansis some account must be given of the Dobāsiyās, who are found now in *taluk* Koyakātā in the Alīpur *tahsīl*. During the wars between Nādir Deo Saheb, a powerful ruler of Cooch Behār, and the Bhutiās, a number of Rājbansis were captured and taken as prisoners into Bhutān. Subsequently Nādir Deo won a great battle, in which the Bhutiā general was killed, and after the peace which followed, the Deb Rājā of Bhutān released his captives. They returned to the Western Duārs, but found themselves outcasted and no Rājbansi would eat with them. They complained to the Duardar Saheb, but he only promised to give them land and provide them with work. He made twelve families into cultivators and appointed the men of the other fifty families to be attendants on any Bhutiās who might visit Rangpur for purposes of trade. The Dobāsiyās used to live near Buxā but, after the annexation of the Western Duārs, they removed in a body to *taluk* Koyakātā. Owing to their long residence in Bhutān, they learnt to speak Bhutiā as well as Bengali and so earned the name of Dobāsiyā.

The Muhammadans.

At the last census the Muhammadans numbered 226,867* divided into Shekhs 161,495, Nasyas 63,884 and Pathans 1,488. The Shekhs and Nasyas may be considered native to the district, though a considerable number of them came originally from the adjoining districts of Rangpur and Dinājpur and from the Cooch Behār State. In appearance, dress and customs, they differ little

* Taken from Provincial Census, Table III, which differs slightly from Table II.

from the Rājbansis and are frequently to be found living in the same hamlet with them on terms of perfect amity. They do not eat pork, but otherwise their religion sits as lightly on them as Hinduism does on the Rājbansis.

Most of the Pathans are wandering traders, but some have contrived to acquire land in the district, though they are not likely to settle down in it permanently. They are usually troublesome and oppress and bully the people on whom they force their goods, while they are not averse to dacoity or highway robbery, when opportunity offers, if they think that there is a likelihood of sufficient plunder to repay their efforts.

The Orāons.

Rājbansis and Muhammadans together comprise about seven-tenths of the whole population of the district. Next to them in numbers are the Orāons, of whom there were 62,844 at the census of 1901. The history of the Orāons belongs properly to the Rānchi district, from which most of them came up to the tea-gardens. In 1881 only 210 Orāons were enumerated in the Jalpāigurī district, so that the bulk of them have emigrated during the last 20 years. They are good workers, cheerful and willing, and give little trouble except when their belief in witchcraft induces them to beat, often to death, some unfortunate person. The supposed wizard or witch is denounced by the *ojhā*, as the witch-doctor is called; he is usually too cunning to take part in the beating or killing of his victim and generally escapes paying any penalty for the crime which he has instigated.

The religion of the Orāons is of a composite order; they believe in a Supreme God, whom they call Dharmesh, but hold that his good intentions are thwarted by a number of malignant spirits; their religious efforts are directed entirely to appeasing these demons so as to prevent them from harming them. Polygamy is permitted among the Orāons, but most of them are content with one wife. Widows can marry again and no restrictions are imposed on their choice of their second husbands.

Although the Orāons came into the district to work on the tea-gardens, numbers of them have settled down as cultivators, either taking up land direct from Government or holding it as under-tenants of a jotdār. As they work hard and crops never fail in the Western Duārs, their settlements are prosperous and many of them are very well to do.

The Meches.

The Meches are of Mongolian origin and are believed to be the Western Branch of the Kāchāri or Bodo tribe. Mr. W. B. Oldham, when Deputy Commissioner of Darjeeling, described them as follows:—

'They are probably the original inhabitants of the Darjeeling Terai, and are a distinctly Mongolian race, with fair skins and large bones and limbs. Their physical appearance and characteristics are quite distinct from the Thāru of the Western Terai. They are disappearing, absolutely dying out faster than any

race of whom I have known or read. The reason is, no doubt, that their distinctive cultivation is by *jhum*, which is barred by Government forest conservancy, and the spread of settled plough cultivation from the south.' It does not appear that the Meches are dying out in the Jalpāigurī district; they numbered 8,760 in 1881, by 1891 they had increased to 17,984, while at the census of 1901, 22,350 of them were enumerated. It is probable that much of the increase between 1881 and 1891 was due to migration from Rangpur and Cooch Behār, but there is no obvious reason why the Meches should not increase naturally; they are practically immune to fever and the average number of a family is about six. There is no doubt, however, that the Meches are being gradually driven towards the east owing to the pressure of more intelligent races; they are improvident and drink heavily whenever they can get liquor; they are lazy and borrow readily from any one who will lend them money without regard to the consequences. As a result they have fallen an easy prey to the money-lenders and speculators, who have exploited the Western Duārs in recent years and many of them have lost their land and been compelled to migrate to the more thinly-peopled tracts in the east of the district. Meches resent the introduction of strangers among them, and it is not uncommon, when one Mech in a hamlet has sold or been compelled to part with his land to a man of another race, for his fellow-villagers to do the same and all move away together to some more remote spot where they hope to live undisturbed.

There is reason to believe that there is a considerable strain of Nepalese blood among the Meches. Both Meches and Nepalese have greater liberty in matters of food before marriage than after—an unmarried man may take rice from persons who are not considered fit to give food to a married man. Both tribes observe the Tihar festival and both call the bride-price *sodhā* or *thekā*. The Nepalese will take water from the hands of a Mech and a curious story is told to account for this. It is said that Jang Bahadur, while Prime Minister of Nepāl, was shooting in the Darjeeling Terai when he saw and fell in love with a Mech girl, the daughter of Ujir Singh, Jamadar of Dhulābāri. He took her with him to Nepāl as his mistress and in return issued orders that in future no Nepāli should refuse to take water from a Mech. It is hardly likely that such an edict would have had any effect unless it coincided with popular prejudices, and it is far more probable that Nepālis take water from Meches because they acknowledge them to be akin to themselves. Meches make excellent policemen and smarten up greatly under the influence of drill and discipline; the armed police reserve at Jalpaigurī is composed of 75 Gurkhas and 25 Meches and it is not easy to tell one from the other. The Subadār, a very smart officer, is a Mech though he is invariably mistaken for a Gurkha by people who do not know him; he has great command over his men and Gurkhas obey him as readily as they would one of their own race.

The Meches of the Jalpāiguri district are divided into two sub-tribes called fAgniā-Mech and Jāti-Mech, which are practically endogamous, or an Agniā-Mech cannot marry a Jāti-Mech without forfeiting his position in his own clan. Among the Agniā-Mech the usual age for marriage is sixteen for a male and twelve for a female; among the Jāti-Mech both sexes marry between the ages of sixteen and twenty. Girls are allowed great freedom, and intercourse before marriage, though not expressly recognised, is not uncommon; if a girl should become pregnant, her lover is expected to come forward and marry her. Married women are required to be strictly faithful to their husbands.

Like many of the animistic tribes of India, Meches are becoming gradually Hinduised; at present they are in the transition stage and hold a very low rank according to Hindu ideas. They, themselves, admit the social superiority of the Rājbansis, but claim to be superior to Gāros, Lepchas and Tibetans. They eat pork, fowls, fish and lizards, but abstain from beef, and the flesh of the long-tailed sheep. Meches are, as a rule, honest and truthful though they have deteriorated somewhat in these respects owing to contact with more civilised races; false swearing is considered a grievous offence among them and the oath which they take to speak the truth runs as follows:—"I will speak the truth. If I speak not the truth may I and my wife and children be destroyed by Mahākāl (the deity who rules over wild animals). Let tigers and bears kill us. Let sickness seize us and all belonging to us. Let all perish and die."

The Mundas.

Like the Orāons, the Mundas were introduced into the district by the tea industry; they did not come into the district in any numbers until comparatively recently, for only 1,855 of them were found in the Western Duārs in 1891. By 1901 the number had risen to 11,672. They are in great demand by tea-planters, for they are hardworkers and stand the climate well. Sir H. Risley in "The Tribes and Castes of Bengal" describes them as "a large Dravidian tribe of Chota Nāgpur classed on linguistic grounds as Kolarian, and closely akin to the Hos and Santhāls, and probably also to the Kandhs."

The Santhāls.

The Santhāls also made their way into the district as tea-garden coolies and in 1901 they numbered 10,857. In Assam where they can be compelled to work they are looked on as first class labourers, but in the Western Duārs they are not held in such high esteem. As all labour is free, they can work or not as they please, and managers of gardens say that they seldom work more than ten days in the month; the rest of the time they sit idle or go out on hunting expeditions from which they do not often return empty-handed. They are very clannish and are capable of combining together to a greater extent than other races seem able to do. In 1906 when the Bengal-Duārs Railway was cut to

pieces by the floods and the price of rice rose temporarily to three seers a rupee in parts of the district, the Santhāl coolies, rather than work a little harder, combined to loot the markets and were only suppressed with some difficulty. The Santhāls are a Dravidian tribe, akin to the Mundas; most of those in the Jalpāigurī district came from the Santhāl Parganas.

The Western Duārs belonged to the Bhutiās until 1865, when it was wrested from them at the time of the Bhutān war, and a considerable number of them live in the hills within British territory. At the census of 1901, 6,798 Bhutiās were enumerated in the Jalpāigurī district, of whom 1,820 were found in the Dām-Dim police circle and 2,490 in that of Alīpur Duār. Their largest village is at Chunābāti near Buxā where more than 1,000 of them reside; this village used to be just above the present cantonment, but owing to the filthy habits of the people it was feared that cholera might break out among the troops and the village was removed to Chunābāti by orders of the Government of Bengal. The Bhutiās.

The word Bhutiā signifies an inhabitant of Bhot or Tibet; Bhot is the Sanskrit form of Bod, which is the native name of Tibet, and Bhutān means the end of Bhot. The Sanskritic-speaking peoples of India consequently call the inhabitants of Tibet and Bhutān, " Bhutiās."

The Bhutiās of Buxā are physically a fine race, not very tall but very robust; most of them have flat features of the Mongoloid type, small eyes, large mouths and a light complexion. Some of them, however, have dark skins and resemble the Rājbansis in features; these are probably the descendants of Rājbansi women who were carried off into Bhutān during the raids which preceded the British occupation of the Western Duārs, but the people themselves say that their dark skins are caused by a fever which is prevalent in Chunābāti and along the foot of the hills. They are an ignorant careless people, but are always cheerful and willing workers; they enjoy a joke and I have seen a number of them roll down the steps in front of the Mess-house at Buxā, yelling with laughter, when a laughing song was played on a gramophone.

Bhutiās build their houses on stone walls or posts 8 or 10 feet from the ground; each has three rooms, one for sleeping, another for cooking, and the third for use as a store-house. They keep pigs, fowls, cows, ponies, dogs, and cats. They are not particular as to their food and eat pork, beef, ducks and fowls. Like many of the hill tribes of Assam they seldom drink milk though they make it into butter and cheese. Tea is a favourite drink; the Bhutiās will use only brick tea which they get from China through Tibet. The tea is put into an earthen vessel with cold water and a little soda and is well stirred; it is then boiled and some butter and salt put into it. After this it is

churned in a bamboo cylinder and strained through a sieve into an earthen tea-pot when it is ready for consumption. The finished article is a sort of soup not particularly palatable according to European ideas. At feasts and religious ceremonies the Bhutiās drink rice-beer which they call *biāchang*.

Many of the Bhutiās at Chunābāti, both men and women, earn their living by carrying loads from Santrabāri at the foot of the hills to the Buxā Cantonment, for which they earn four annas a trip. When a wing of a regiment was stationed at Buxā, there was plenty of work for them, but since the troops have been reduced to about 200 men, the villagers have been hit rather hard, as few of them have much cultivation.

Women are allowed all possible freedom and great license prevails among unmarried people. Among the Bhutiās of Buxā no marriage ceremony is observed; if a man wishes to marry a woman, he sends a messenger to ask her if she is willing to marry him; if she agrees to do so, she goes to his house and lives with him as his wife. Sometimes a woman demands a written promise from the man that he will not abandon her; the document given is written by the Lama or priest and witnessed by some of the headmen. Polygamy is allowed and a Bhutiā may have as many wives as he can support; if he has more than one, the first is the head wife, and the others have to obey her orders. Polyandry is also practised; if a woman's husband has brothers she is looked upon as the wife of the brothers also and cohabits with them during the absence of her husband.

The Totos.

The Totos are a curious race whose village is built on a hill called by them Badoo, about 5 miles from the Hantapārā tea-garden. There are only about forty houses of them left and they do not know whence they came, nor of what race they spring, though they allege that they have been at Totopārā for many generations. They have a language of their own, and as they associate little with other races, they can only speak a few words of Bengali and it is very difficult to communicate with them. They resemble the Bhutiās to some extent, but wear their hair long; they are very dirty in their persons and are fond of eating putrid meat; they are extremely fond of whisky or any other spirituous liquor which they can get and will drink as much as they can obtain.

The houses in Totopārā are well built and raised on piles to a considerable height from the ground; pigs and fowls abound, and the people are prosperous. The village is very pretty with clusters of betel-nut palms and a few large orange trees. The main orange groves are a few hundred yards away from the village, the trees are healthy and the Totos make a large amount of money by selling the fruit. The cultivable lands belonging to the village are very fertile and yield good crops. Totos marry only among themselves and a man cannot have more than

one wife; widows are allowed to re-marry, but if they do they must leave any children by their first husband with his relations.

Nepalese castes.

The most numerous Nepālese castes in this district are the Mangars, who number 3,709, the Limbus 2,938, the Newārs 2,770, the Murmīs 2,117, the Khambus 1,818, the Gurungs 1,176, the Yākhās 1,163, and the Kāmis 1,082. The Mangars and the Gurungs are two of the three dominant tribes of Nepāl, who overthrew the Newār dynasty in 1769. The original home of the Limbus is in the east of Nepāl; from their appearance they are probably descendants of early Tibetan settlers; they do not rank among the regular fighting tribes of Nepāl, though they offered a gallant resistance to the invading Gurkhas. The Newārs were the ruling race of Nepāl until ousted by the Gurkhas; some of them still adhere to their old religion Buddhism. The Murmīs belong to a Mongolian or semi-Mongolian race and claim to be the earliest settlers in Nepāl; they appear to come of a Tibetan stock which has been modified by intermixture with Nepālese races. The Khambus live in the east of Nepāl between the Sankos river and the Singhālia range and Mechi river; they claim to be Jimdārs, one of the fighting tribes of Nepāl, and bear the Kirānti title of Rai. The Yākhās are an agricultural caste calling themselves Dīwān and are considered by some to be merely a sept of Jimdārs; they inhabit the same tract of country as the Khambus and Limbus. The Kāmis are blacksmiths and goldsmiths; the caste ranks so low that in Nepāl its members are not permitted to enter the courtyards of temples and have to leave the road when one of the higher castes approaches, and to call out to give warning of their approach.*

Many of the Nepālis in the Jalpāigurī district are employed on tea-gardens near the hills which stand at some little elevation, such as Sām Sing, Matiāli, Lankapārā, and Hānsimārā; they will not work on gardens right on the plains. In addition to these numbers have taken up land and settled down as cultivators while others are graziers and own large herds of buffaloes.

LANGUAGES.

With such an extraordinary admixture of races it is not to be wondered at that many languages are spoken in the district; the most common is a corrupt dialect of Bengali, known as Rangpuri, or Rājbansi, which is spoken by 77 per cent of the population; it is the language of the Rājbansis and Muhammadans and is spoken by most Meches. Among the languages native to the district may be mentioned Mechi and Toto. Bhutiā or Tibetan is spoken at Buxā and along the foot of the hills and Khās is spoken by most of the Nepālis. Of the languages introduced by the tea industry Orāon is spoken by nearly 8 per cent of the population and Mundāri and Santhāli by more than 10,000

* An excellent account of the Nepālese castes is given in the Gazetteer of the Darjeeling district.

persons each. It may be said generally that Bengali is the common language outside the influence of the tea-gardens; on the tea-gardens a corrupt form of Hindi is current as a *lingua franca* except where the bulk of the labour force is Nepāli when Khās is the language spoken.

RELIGIONS. At the census of 1901 531,625 persons returned themselves as Hindus, 228,487 as Muhammadans, 15,236 as Animists, 6,291 as Buddhists and 2,486 as Christians. The Hindus form 68 per cent of the population; the proportion of Muhammadans has declined rapidly from 44 per cent in 1872 to 29 per cent in 1901. They are chiefly Shekhs and Nasyas, the former largely predominating, and many of them are probably converts from the aboriginal Koch and Mech races. Animists form 2 per cent of the population, and the remaining 1 per cent is composed chiefly of Christians and Buddhists.

Hinduism. From the nature of the races, who call themselves Hindus, it is not surprising that the Hinduism professed in the district is not of a very rigid character. The Rājbansis, who form two-fifths of the population, are described in Mr. Sunder's Settlement Report, as being "Hindus when it suits them to be so, and Meches when they obtain pork and wish to eat it;" in other words, they retain many of their ancient beliefs and superstitions. The popular religion is expressed in the worship of a number of spirits or deities whose chief attribute is their power to cause evil if they are not appeased by offerings and sacrifices. The following are the twelve principal deities of the Rājbansis:—(1) the Bisto Thākur, who is worshipped so that the rains may not fail; (2) the Borma Thākur, who destroys homesteads by fire if he is displeased; (3) the Pobon Thākur, who sends storms and hail and must be appeased to prevent them; (4) the Basumati Thākurānī, who has power over the earth; if she is not satisfied crops fail and there is famine in the land; (5) the Bishhaorī Thākurānī, a very evil deity; if she is not pleased, children die or become blind, men and cattle are bitten by snakes, and all sorts of troubles come; (6) the Chāndi Thākurānī, who causes sickness; (7) the Kāli Thākurānī, who is always endeavouring to do harm and must be frequently worshipped; (8) the Mahākāl Thākur, the god of the hills and jungles; if he is not propitiated he sends tigers and leopards to kill the people; (9) the Grām Thākur, who prowls about villages with his wife and causes illness among children; (10) the Sib Thākur, who protects the people from troubles, provided that offerings of milk, rice and plantains are made to him; (11) the Lakhi Thākurānī, who brings good fortune; and (12) the Dharam Thākur, who, like Sib and Lakhi, is a kindly deity.

Although the Rājbansis are now considered to be a caste of Hindus, it will be seen from the above list of deities what a large part demonology plays in the religion of the people. The Hindu

law is held not to apply in its entirety to the Rāikats of Bāikanthpur, and a few years ago the Privy Council ruled that the right of adoption did not exist in this important and wealthy family.

Muhammadanism.

Muhammadans are not much stricter in their religious observances than Hindus, and still retain many of the superstitions of the Rājbansis and Meches from which races their ancestors were probably converts. They live on good terms with the Rājbansis and it is not uncommon to find families of the two religions dwelling together in the same homesteads though in different houses.

The Meches.

The Meches are still in an early stage of transition from Animism to Hinduism; they call themselves Hindus of the Saiva sect and worship Siva under the name of Batho, and his consort Kāli as Bāli Khungri. Kāli is said to cause cholera when she is displeased. The Agniā-Mech sacrifice buffaloes, goats and pigeons to Batho, while Kāli has to content herself with pigs, fowls and goats, which the Jāti-Mech offer indifferently to either. The Jāti-Mech also worship as a household goddess a nameless personage, who is represented by a lump of sun-dried clay set up in the principal room. Other deities are Mahesh Thākur, who is feared because he punishes people who commit faults, and Mahākāl, who is a good spirit and watches over the doings of the people. Meches prefer to burn their dead if they can afford the expense of a funeral pyre; poor people bury, placing the corpse face upwards with the head towards the south.

The Bhutiās

The Bhutiās are nominally Buddhists, but in practice their religion amounts to little more than repeating the mystic words "Om mani padme Hum." There is a small temple at Chunābhāti, at which a Lama offers up prayers daily for the people. A few years ago the Lama died and a deputation was sent to the Subdivisional Officer of Alīpur Duār to ask him to appoint another man as the Bhutiās felt great inconvenience for want of a Lama. He nominated a suitable person and the deputation went away satisfied.

It may be said generally that Hinduism is spreading in the Jalpāiguri district and gradually displacing the old animistic religions.

Christianity.

In 1888 the American Baptist Missionary Society began work in the Jalpāigurī district, the missionary stationed at Jalpāigurī being also placed in charge of the Mission in the town and district of Dinājpur. By 1898 the number of native Christians connected with the Society was 20 in Jalpāigurī and 527 in Dinājpur. At the close of this period an additional missionary was sent to Jalpāigurī, but in 1900 one of the two missionaries was transferred to Rangpur. Sub-stations have been established at Gāirkātā, Pātkātā, and Danguājhār. The work done by this Mission is chiefly evangelistic; the gospel is preached in villages, bazars, and markets in the district, and translations

of the Bible in Bengali, Hindi, Urdu, Nepāli, Tibetan and English are sold. In 1902, 4,200 copies of the gospels were sold and many tracts were distributed gratuitously. Attempts are made to influence the young by establishing schools in which religious as well as secular instruction is imparted.

The Kālimpong Mission of the Church of Scotland has a station at Gorubathān, in the Dārjeeling district, close to the boundary of the Western Duārs. The missionaries visit the tea-gardens and work among the tea-garden coolies. This Mission has done much to advance the spread of education.

The Scandinavian Alliance Mission works among the Bhutiās. Miss Fredrecson of this Mission lives at Chunābāti and preaches to the Bhutiās in the vicinity.

The Santhāl Colony.

A very interesting attempt at colonization has been made by the Church Missionary Society in *taluk* Mahākālguri in the Alīpur Duār subdivision. In 1890 the Rev. A. J. Shields, who was finding difficulty in getting land for his Santhāl Christians in their own country, was informed by Mr. Sunder, the Settlement Officer of the Western Duārs, that there was plenty of good waste land in the Alīpur subdivision available for settlers. Mr. Sunder selected a tract of land between the Gadādhar and Rāidhak rivers and the Rev. A. J. Shields came up with a party of Santhāls from Godda to look at it. They were pleased with what they saw and the Bengal Government sanctioned the reservation of about 70 square miles of country for a Santhāl colony. When the Mission sent up the first colonists, the land was covered with dense reed jungle; elephants, tigers, leopards, and bears were numerous. The nearest railway was 60 miles distant, and large rivers had to be crossed in boats. The people suffered severely at first from cholera, fever and pneumonia and the mortality was high. For several years the number of colonists was not more than 500, fresh settlers could not be induced to go and it seemed as if the scheme would be a failure. The area reserved for the Santhāl colony was reduced to 27 square miles, and as there seemed no hope of occupying even this small tract, it was, with the consent of the Society, further reduced to 14 square miles. At the present time there are about 1,500 Christian and 500 other colonists, all of whom are Santhāls. Those who are not Christians sign a pledge to abstain from intoxicating drink and heathen sacrifices and to abide by the rules of the colony. Every acre of available land is under cultivation, the people are prosperous and the colony is self-supporting and costs the Church Missionary Society nothing. Owing to the clearing of the land, wild animals have disappeared.

The colony is divided into ten villages, each of which has a headman chosen by the villagers and appointed by the Superintendent. The affairs of the colony are managed by a council presided over by the native pastor, of which the headmen are

members. The people have built their school-house themselves and during the past two years raised Rs. 520 for the salaries of the teachers; their church, which is a large one, cost them nearly Rs. 3,000, all of which was subscribed by themselves. Liquor shops are not allowed within a radius of 5 miles of the colony and the council does its best to prevent drunkenness. The Superintendent, the Rev. Canon Cole, writes as follows:—"The colony is now an established affair. All the land has been taken up. Fresh applications are constantly made. Our answer is there is no more land available, not even enough for the families of the present colonists. Nothing succeeds like success! I was opposed to the scheme at first and thought it was a mistake and unnecessary. I was then in charge of the large *pucca* church at Taljhari and, strange to say, the greater number of those who emigrated went from the villages near Taljhari. As we afterwards remembered the well filled church there and then saw it half empty, we felt quite dispirited; but now we have the joy of seeing the large colony church filled to overflowing."

The colony is successful and its people are increasing in numbers; no land fit for cultivation remains within its limits and those who wish to set up for themselves will have to take up land elsewhere. If they are to be prevented from reverting to the old Santhāl beliefs and superstitions, it is very desirable that a resident missionary should be appointed for the colony.*

* This account of the Santhāl Colony is taken from a paper read by the Rev. Canon Cole at the Calcutta Missionary Conference on April 6th, 1908.

CHAPTER IV.*

PUBLIC HEALTH.

GENERAL CONDITIONS.

The district is situated to the south of the Darjeeling Tarai and the Bhutān hills, and is well known to be unhealthy; in eight out of the ten years ending 1901, it figured among the six districts with the highest mortality from fever in the Province of Bengal. The mean ratio of births for the ten years from 1893 to 1902 was 31·31 per 1,000 and of deaths 31·74 per 1,000; the figures for 1907 were births 39·72 and deaths 34·33 per 1,000. The difference is partly due to improved registration, but the registration of vital statistics is still far from accurate, particularly in the tea-garden areas, the heavy rains and many unbridged rivers making it difficult for the chaukidars to report regularly at the police stations.

The Tīsta river divides the Jalpāigurī district into a western or moderately malarious tract and an eastern or intensely malarious region. The latter, known as the Western Duārs, has an evil reputation for malaria and black-water fever comparable only to the deadliest regions of Central Africa; intersected by numerous rivers and streams and with an exceptionally heavy rainfall, it furnishes ideal breeding grounds for the anopheles mosquito. The test of the malarial intensity of any region is the percentage of children of from two to ten years of age who have malarial parasites in their blood; the figure representing this percentage is termed the malarial endemicity index or shortly the endemic index. The figures given in the margin show the endemic indices of fives places in the district as ascertained in 1901; subsequent enquiries made in 1907 prove that even these figures are too low, and that the true endemic indices are from 10 to 20 per cent higher. The table, however, shows with fair accuracy the risk to which immigrants into the district are exposed. It will be seen that the degree of infection varies greatly. Jalpāigurī town, representing the western region, is moderately malarious, but across the Tīsta in the Duārs, the index rapidly rises until it reaches its maximum at Nāgrakātā. In view of the above it is not to be wondered at that the European community coming from a non-malarious country and the tea-garden coolies from slightly malarious districts suffer much from fever. The adult native population of Rājbansis, Muhammadans

Jalpāigurī	16
Māinaguri	25
Rangamati	43
Nagaisurī	55
Nāgrakātā	72

* I am indebted to Captain W. D. Ritchie, I.M.S., Civil Surgeon of Jalpāiguri, for assistance in preparing this chapter, and to Dr. Bentley, M.B., for his valuable note.

and Meches are relatively immune to fever. The infantile mortality is very high; in the Duārs the children suffer to such an extent that it must be considered normal for a child to have repeated attacks of fever. The existence of a sturdy people in such a deadly region can only be explained on the principle of the survival of the fittest; those who have not died in the process have acquired immunity by repeated infections in childhood. The immunity is probably limited to the variety of parasite with which the individual has been infected, but, as his chances of getting, at one time or another, all the varieties of parasite are so great, he is very well protected.

PRINCIPAL DISEASES. Fevers.

The greatest mortality is caused by fevers, the death rate from which was 31·94 per 1,000 in 1907 out of a total death rate of 34·33 per 1,000. Malaria is prevalent all the year round, but is most intense during and after the rains. The types of malaria found in the district are simple tertian, malignant tertian, quartan fever and the deadly black-water fever. Mixed infections and double infections of the same parasite often make it difficult to recognise the variety from the temperature chart, but a careful record will usually show which variety is present. The cycle of simple tertian fever is 48 hours and the fever occurs every third day. The malignant tertian has a cycle of from 24 to 48 hours and the fever occurs every other day or more commonly daily. The quartan parasite has a cycle of 72 hours and the fever paroxysm occurs every fourth day.

ENQUIRY INTO THE OCCURRENCE OF MALARIA AND BLACK-WATER FEVER IN THE WESTERN DUARS.

At the instance of the planters an enquiry into the occurrence of malaria and especially of black-water fever in the Western Duārs is now being made by Dr. Bentley, M.B., and Captain Christopher, I.M.S.

The following account of the fevers of the Western Duārs and of the results of the investigation, so far as it has gone, has been kindly written by Dr. Bentley for this volume:—' Since the British occupation of the Duārs this tract has shared with the Darjeeling Tarai the reputation of being one of the most intensely malarious regions in India; but it was not until the visit of the Royal Society's Malaria Commission in 1901 that anything really definite was known as to the actual incidence of malarial disease in this part of the country. The investigations conducted on this occasion by Drs. Stephens and Christophers and Captain S. P. James, I.M.S., showed that the malarial endemicity of the Duārs was extraordinarily high and that black-water fever was as common in that locality as in any region of Africa visited by the Commission. Until quite recently no further investigation into the conditions relating to malaria in this area was undertaken, but in 1907 the Duārs Planters' Association, alarmed by the apparently increasing unhealthiness of the district, made an urgent appeal to the Indian Government, with the result that an enquiry was instituted into the occurrence of

malaria and black-water fever, and the general condition of sanitation in the Duārs.

'It is impossible here to refer, except in a very general manner, to the conclusions arrived at as a result of the present enquiry, of which only a partial report has as yet been published, and before doing so it is necessary to indicate briefly the state of our present knowledge regarding malaria. Since Laveran's discovery of the malarial parasite and Ross' brilliant demonstration of the transmission of malaria by mosquitoes, it has been recognised that malarial disease is invariably associated with the presence of minute animal parasites in the blood of infected persons, and that the spread of malaria in any locality is dependent upon (1) the presence of infected persons; (2) the presence of other susceptible persons; and (3) the presence of susceptible mosquitoes, *i.e.*, of certain species of anopheles, capable of contracting malarial infection from infected persons and of transmitting it by their bite to other susceptible people. Three distinct species of the malarial parasite are recognised, quartan, simple tertian, and malignant tertian, and the infection of a human subject by any one of these parasites is followed by the occurrence of certain well known symptoms. Quartan and simple tertian malaria are characterised by recurring attacks of ague and fever followed by enlargement of the spleen, and in severe cases by great debility, anæmia and dropsy. Malignant tertian malaria is frequently the cause of fever of a bilious and remittant type and may produce very fatal attacks. Mild injections by either form of parasite may occasion attacks of socalled "masked malaria," with undefined symptoms of general malaise, headache, biliousness, indigestion, etc., conditions which are almost invariably spoken of as "low fever," "a touch of the sun" or a "go of liver." Malarious infections are exceedingly difficult to eradicate except by systematic quinine treatment extending over many months, and during their course, whenever the subject is exposed to any kind of depressing influence, relapses of febrile or other symptoms are very liable to occur.

'In the absence of infected persons and of susceptible anopheles mosquitoes, malaria does not arise and the so-called "jungle fevers," which were at one time supposed to be contracted in uninhabited swamps or virgin forests, have been found on investigation to be either severe relapses of malaria in infected persons exposed to the hardships of camp life, or to have been primary infections contracted in the neighbourhood of native huts or from native servants. As the incubation period of malaria varies from one to three weeks, it is easy to understand that mistakes may be made by persons ignorant of this fact. Now although much that is known regarding malaria serves to show its relation to geographical situation, climate, rainfall, etc., it does not explain all the facts which have been observed from time to time. The reason for this is not far to seek, and it is to be hoped that one result of

the present enquiry will be the recognition of the overwhelming importance of certain factors influencing the prevalence of malaria, which have hitherto been entirely overlooked. The absolute failure to demonstrate the presence of the malaria parasite except within the bodies of infected human beings and of susceptible mosquitoes found in immediate association with them; and the experimental proof that these mosquitoes can be infected from man and that man again may be infected by the bite of such germ-laden mosquitoes, appears to show that the existence of this parasite is confined to the human and the insect host; every year the evidence in support of this hypothesis becomes more and more convincing.

Lines of investigation.

'This being so, in the investigation of the epidemiology of malarial disease two lines of enquiry naturally suggest themselves:—on the one hand the most minute and careful study of the human host, together with every circumstance relating to his racial, social or economic condition, his movements, his aggregation into communities industrial and otherwise, and everything which may influence in the smallest degree individual or collective susceptibility to malaria; on the other hand there is the study of the insect host, the anopheles mosquito, its natural history and everything about it which may throw light upon its relation to malaria. Though much attention has been paid since Ross' discovery to the study of mosquitoes in general and the anophelinæ in particular, with the result that an enormous amount of information has been collected about this side of the question, the significance of the human factor in the problem of malarial dissemination has never been recognised. The importance of this neglected factor may be demonstrated by a careful review of many facts relating to the character, movements and general condition of populations in malarious districts, while its recognition will prove the means of elucidating many obscure points in the epidemiology of malaria.

Malaria in the Duārs.

'Among Europeans, of whom over 200 reside in the Duārs, the incidence of malaria is very high. Visitors to the district, no matter what the season, usually suffer from the disease from one to three weeks after their arrival. Residents of only a year or so and those recently returned from furlough are prone to repeated attacks of fever, while those of longer standing are extraordinarily subject to liver, biliousness and dyspepsia, the frequent signs of masked malaria. It is not surprising, therefore, that the invaliding and death rates among Europeans in the Duārs are abnormally high; the mortality among this community which consists almost entirely of strong adults in their prime, ranging from 20 to over 75 per 1,000, as compared with a death rate of 7 per 1,000 for the whole of the European population of India. The high malarial incidence and the resulting sickness and mortality is not due merely to accident or chance, but is the direct

outcome of the extraordinary prevalence of malarial infection among the general native population of the Duārs. The European in the tropics invariably contracts malaria from the natives who live in his immediate neighbourhood, and the closer this proximity, the larger their number and the more prevalent the disease among them, the more certain is he to suffer from the results of constantly repeated infection. Obviously then, in order to get a true insight into the epidemiology of malaria in any region, it is necessary to make a most careful study of the disease as it affects the general population. The present investigation, which has been carried on since July 1907, has shown that the commonly held opinion regarding the extreme unhealthiness of the Duārs is well founded. So far the enquiry has been confined mainly to the tea-gardens, which find employment for more than 150,000 persons and probably support a much greater total population. Among these people, malaria is present to an extraordinary degree.

Endemic index of Malaria.

'It has been known for many years that new-comers to a malarious district are specially liable to contract the infection, while older residents acquire a relative immunity. Koch, investigating malaria in New Guinea, described certain villages in which, while the young children showed almost universal infection, the adults appeared to be entirely exempt. These villages were generally far removed from the lines of communication and invariably possessed fixed populations. Other villages, so situated in relation to main roads, markets, navigable streams, or harbours that everything tended to encourage movement in the population and ensured the frequent influx of new residents, while possessing a similar amount of infection among the young children, also showed an extraordinary prevalence of malaria among the adult population. This prevalence was due to the floating character of the population and to the constant introduction into the endemic area of large numbers of non-immunes. From these observations Koch inferred that the prevalence of malaria in any locality bore a direct relation to the population of new arrivals or non-immunes among the population. Stephens and Christophers working in Africa confirmed and extended Koch's observations and adopted as the measure of the comparative malariousness of a place the percentage of infected children, these being *ipso facto* "new-comers." The figure arrived at they termed the endemic index of malaria. The examination of the blood of young children in the Duārs has shown the endemic index to be very high, rarely falling below 50, in many instances approaching 100, and in general averaging about 80. This fact, besides showing the widespread prevalence of malaria, also indicates the extent to which all new-comers to the Duārs must suffer. Were the population a fixed one, we should probably find that malaria was chiefly confined to the young, causing perhaps a heavy child mortality and checking the natural increase of the population, but affecting the adults slightly. We

have evidences of such a condition in the case of the Meches and other natives born in this part of the country.

The tea-garden population.

'But unfortunately the tea-garden population in the Duārs is almost entirely an immigrant one, recruited every year from Chota Nāgpur, the Santhāl Parganas and the Darjeeling hills, by thousands of new coolies, the majority of whom show little evidence of malaria on their arrival. This yearly influx of new-comers adds enormously to the non-immune population and acts as fresh and exceedingly inflammable material heaped upon an already glowing fire. There is probably no malarious region in India of like area in which this condition is to be met with on anything approaching the same scale, and it must also be remembered that in the Duārs this large influx of non-immunes is not a temporary but a continuous yearly phenomenon, dating back some thirty years and due almost entirely to the extension of the tea industry. It is not an instance of true colonisation such as may be seen elsewhere, but an example of the persistence over a wide area and to an extraordinary degree of an artificial condition of influx in the population, which is, except in the case of large cities (which are little affected by malaria), usually only temporary. Of the people who pour into the tea-gardens every year, only a small portion become permanently settled on them, the vast population being content to migrate from place to place every year or so backwards and forwards through the district; some go out into the villages and a considerable number eventually return to their own country. In the absence then of large settled garden populations, we have in the tea-garden area of the Duārs an instance of a wide tract of country dotted over with innumerable labour camps. It is difficult to emphasize sufficiently the full significance of this phenomenon and its tremendous importance with regard to the problem of malaria in the Duārs, for in the absence of accurate data its effects cannot be easily estimated. The holocausts among the immigrant employés at Panama, which caused the failure of the French canal scheme, serve to indicate the results which always follow the careless importation and aggregation of large non-immune populations within the malarious zone. To precisely similar causes, *viz.*, the recruitment and aggregation of numerous coolie labourers without due precautions upon the sugar plantations of Mauritius, may be traced the frightful outbreak of malaria which swept that once salubrious island from end to end some forty years ago. But though the introduction of large numbers of non-immunes into a malarious district and their collection into labour camps is always risky, it is not necessarily the cause of widespread and intense malaria, provided everything is done to guard against the danger, as the recent experience of the Americans at Panama conclusively demonstrates. The immigration of non-immunes is therefore not the sole factor of importance which may exalt the malarial endemicity of a district; it is rather this in conjunction with other circumstances almost

invariably found in association with it and always to be met with in new countries, where large commercial or industrial undertakings involving the bringing together and employing of numerous labourers, are organised and conducted without due recognition of the most elementary rules of hygiene and sanitation.

Malaria and soil disturbance.

'In the tropics wherever huge engineering works or the establishment of some important industry have been undertaken, involving extensive soil disturbance, we nearly always encounter the conditions referred to, and herein lies the true explanation of the countless observations showing that opening of the soil will lead to outbreaks of malaria, for, in reading the description of such outbreaks, it will invariably be found that they occurred during the course of railway, road or canal construction or extensive building operations necessitating the employment of considerable numbers of labourers. The explanation, current a generation ago and still held by the uneducated, suggested a hypothetical emanation from the soil as the cause of these outbreaks, but more recently it has been supposed that the multiplication of puddles in the course of excavation led to an enormous increase in the breeding grounds of the anopheles mosquito and hence to the spread of malaria in epidemic form. That such a condition may be an accessory cause is probable, but considered alone it forms a hopelessly inadequate conception. For what may be expected in a malarious country when large and mixed populations of workers are massed together under the temporary conditions inseparable from camp life? The special liability to disease in epidemic form incurred by armies in the field and concourses of pilgrims has long been recognised, and precisely similar dangers are encountered wherever the industrial aggregation of labour under primitive conditions is met with. And so throughout the Duārs, as a direct result of its numerous labour camps, with their shifting population of mixed character, we find a prevalence and exalted intensity of malarial infection only met with in epidemic manifestations of the disease. It is the existence of the conditions indicated and their inevitable consequences which serve to mark off the Duārs as different from other tracts apparently but little dissimilar in physical outline, rainfall, climate and geographical situation.

Black-water fever.

'Among disease conditions resulting from the universal intensity of malaria throughout the Duārs, none is more striking than black-water fever, which is exceedingly common both among Europeans and educated natives. It was the frequent occurrence of this disease, causing a heavy mortality and much invaliding among the planters, which led to the appeal for an investigation of which the present enquiry is the result. Black-water fever appears to be mainly confined to Europeans, Bengali Babus and tradesmen, Chinamen, dhobies, and servants drawn from the town-dwelling classes of Bengal. New-comers are never attacked and it is rare for the disease to appear in residents of less than six

months' standing. The second and third years of residence in the Duārs is the most dangerous period, the majority of cases occurring then. After four or five years of unbroken residence in one place, the liability to the disease is much reduced, but a change of situation or long leave to a healthy climate annuls this acquired immunity, while one attack of the disease exercises a markedly predisposing effect so that recurrences are not uncommon. The actual mortality is about 10 per cent of all cases, but is generally greater among Europeans than among natives. The onset of the disease is frequently mistaken for an ordinary malarial attack which it at first resembles. There is usually a sharp chill like severe ague, but this is quickly followed by the passage of dark brown, blackish or bloody urine, and generally by repeated and persistent bilious vomiting; the temperature rises rapidly, pain at the pit of the stomach may be complained of and jaundice soon becomes evident. Such an attack may last from twelve hours to four or five days and relapses are not uncommon. In favourable cases the first sign of improvement is the clearing of the urine, the jaundice and the fever usually persisting longer than the hæmoglobinuria. In fatal cases the patient may die from heart failure while still passing large amounts of dark urine, but more frequently the urine becomes more and more scanty in amount until suppression supervenes and causes death. The diagnosis of the disease is easy in typical cases, but many mild attacks escape recognition especially among natives, and in some parts of India even fatal cases are still mistaken for malignant jaundice or are termed "fever and jaundice," the name by which the disease was known in the Duārs before its real nature was recognised. The only certain method of diagnosis in doubtful cases is the spectroscopic examination of the urine supplemented by the use of the microscope. The essential nature of the disease is a blood destruction so enormous that the red corpuscles are reduced to one-half or even one-tenth of the normal within two or three days. This destruction is due to the sudden solution of the red blood corpuscles in the blood plasma, their colouring matter, hæmoglobin, being excreted from the kidneys, thus causing the peculiar colour of the urine which has given to the disease its name of black-water fever. Malarial parasites are generally present in the blood at the time of onset, but rapidly disappear in the course of the disease although other evidences of malaria are as a rule present or may be found post mortem.

Treatment.

'At present the most successful treatment is the free use of bland diluents, such as barley water or milk and soda. Drugs are of little service and meat extracts are distinctly harmful in the acute stage, but in cases of exceptional weakness they may be necessary after the hæmoglobinuria has ceased. It seems probable that further experiments may lead to the discovery of a specific serum or anti-toxin treatment.

Nature of black-water fever.

'The present investigation has shown that black-water fever is the result of constant and repeated inoculations of malaria, a danger to which all residents in the Duārs are daily exposed. Owing to the cumulative effects of constant and repeated infection, the constituents of a peculiar and complex blood poison are produced within the body and a condition of unstable equilibrium ensues. When this state of things has been induced, the action of a chill, over-fatigue, a superadded attack of malaria, or even a dose of quinine may cause the sudden combination of the elements, which together form the blood poison referred to, and the immediate result is the dissolution of the red blood corpuscles with the occurrence of the symptoms characteristic of black-water fever; but, though the condition has a malarial origin, it must not be confused with a severe malarial attack, from which it is as distinct as an attack of delirium tremens is distinct from mere intoxication.

Prophylaxis.

'From what has been said, it is evident that the methods to be adopted for the prevention of malaria and black-water fever are essentially the same, and among prophylactic measures education stands pre-eminent. The interest, aroused throughout the Duārs by the present enquiry, has led to a remarkable dissemination of knowledge regarding malaria among the European residents and this has resulted in the very general adoption of precautions against the disease. Since 1907 some 75 per cent of the Europeans in the Duārs have made use of systematic quinine prophylaxis in the form of a 5-grain quinine tabloid taken daily. In addition far greater care has been exercised in the use of mosquito nets and a large proportion of the bungalows have been furnished with galvanised wire mosquito screens to the doors and windows or verandahs. Coincidently with this the general health of the European community has shown a remarkable improvement; there have been far fewer cases of fever, less serious illness, and only two cases of black-water fever. No case of black-water fever occurred among those who had adopted the precautions described. As regards prophylaxis among the general population, it is premature in the absence of any organised campaign to do more than refer to the fact that, in a number of instances, planters have begun to distribute quinine in palatable form freely among the coolies. In some cases the consumption of this valuable remedy, previously used in hopelessly inadequate amounts, has increased ten-fold. This is undoubtedly a move in the right direction, but, at the present time, there are no figures available to show the actual results attained, and it is obvious that, without proper organisation both for the carrying out of an anti-malarial campaign and for the collection of exact data, any estimate of the benefit which may be derived from the adoption in the Duārs of this, or any other method of malaria prevention must be largely a matter of guess work.'

DISTRIBUTION OF QUININE.

From what has been written above it will be seen that the only drug of use in a malarial attack or for the prevention of malaria is quinine. So far all the attempts made by Government to popularise it have failed, though it has been sold at a loss, centres of distribution have been established at the head-quarters of every district, and clerks have been paid for the extra wŏrk involved. If the article sold had been chocolate or cigarettes, the sales would have been enormous, but as quinine is an extremely unpalatable drug, it will remain unpopular until it is sold in an attractive form. The most likely method of making quinine popular is to sell it in the shape of sugar-coated pills or tabloids for adults and older children and of tannate in chocolate or powder form for younger children. The District Board of Jalpāigurī has recently (1908) ordered 100,000 sugar-coated pills for free distribution in the most malarious areas in order to induce the villagers to take the drug more often.

Cholera.

Odd cases of cholera occur throughout the year, and it is probable that many streams and wells contain the germ of the disease, though it is only when the winter rains have been short and streams and wells are in consequence much reduced or dried up that cholera becomes epidemic. The gradual warming of the water in March, April and May seems to favour germination and, coupled with a greatly diminished water-supply, the necessary factors are complete. Cholera does not rank high in the returns as a cause of death, but the mortality from the disease in particular areas is often great; in 1906, which was a bad year, it was responsible for 2·36 per cent of the total mortality of the district. The worst affected tracts are the *tahsīls* of Fālākātā and Alīpur and the reason for this seems to be the presence of a considerable Mech population. The majority of the Meches of the district are found in these *tahsīls* and, owing to their nomadic habits, cholera, when it breaks out, spreads rapidly. They do not bury their corpses like other races, but throw them into the nearest stream and flee to the forests, polluting the streams with bodies as they go. The result is that the streams outside the forests get infected and the residents in settled tracts, dependent on streams for their water, cannot escape infection.

OTHER DISEASES.

Spleen and goitre are common diseases and the proportion of persons suffering from insanity and deaf-mutism is higher than in most parts of Bengal.

VACCINATION.

The table given in the margin shows the number of persons successfully vaccinated during each of the last five years and the ratio of success per mille of the population. There has been a marked improvement in the numbers of persons protected against small-pox.

Year.	Successful vaccination.		Total.	Ratio of success.
	Primary.	Secondary		
1903-04 ...	25,208	262	25,470	32·34
1904-05 ...	22,838	449	23,287	29·57
1905-06 ...	27,440	244	27,684	35·15
1906-07 ...	23,570	167	23,737	30·14
1907-08 ...	27,008	1,240	28,248	35·87

The average ratio per mille of the population for the ten years from 1892-93 to 1901-02 was 26·92 while for the five years shown in the table it was 32·60. On the whole, there is less prejudice against vaccination in the Jalpāigurī district than in many other parts of Bengal.

MEDICAL INSTITUTIONS. The Jalpāigurī Hospital.

The chief medical institution in the district is the hospital at Jalpāigurī. The present building is a fine masonry structure, completed in 1905, in place of the old hospital which was gloomy and unhealthy. It is much appreciated by the people as is shown by the number of in-door patients who have attended it for treatment. In the ten years from 1895 to 1904 the average daily number of in-patients was 9·12; in 1905 the year in which the new hospital was opened, it rose to 10·60; in 1906 it increased to 17·83 and in 1907 it was 23·98. The wards are always full, and as soon as a bed is vacated, it is occupied by a new patient. The total number of in-door patients treated in 1907 was 758 and of out-door patients 9,215. The Commissioners of the Jalpāigurī Municipality are proud of their hospital and make a large grant every year for its maintenance; the District Board gives Rs. 1,200 a year and the rest of the expenditure is met from private subscriptions. It has been arranged to build two sets of two rooms each for the accommodation of patients of the higher classes who will not go into the public wards; in one of the rooms the patient will be treated and the other will be reserved for any of his relations who wish to stay with him and look after him.

Dispensaries in the interior.

In the interior of the district there are charitable dispensaries at Alīpur Duār, Fālākātā and Titālyā where 7,238, 6,839 and 5,987 patients respectively were treated during 1907; these three dispensaries treat both in-door and out-door patients. Bodā with 5,676, Māinagurī with 5,325 and Kumargrām with 3,033 patients are out-door dispensaries. A new dispensary was opened at Pātgrām in 1907, at the request of the inhabitants of the vicinity, who subscribe about one-third of the cost of maintenance; it treated 2,995 patients and had a daily average of 31·77 and will probably become an important dispensary in a few years' time. In addition to the above institutions the Mahārājā of Cooch Behār maintains a well equipped dispensary at Debiganj, the head-quarters of the Chaklajāt Estates.

CHAPTER V.

AGRICULTURE.

GENERAL CONDITIONS.

It has been stated in a previous chapter that the Jalpāiguri district was formed by separating the *thānās* of Jalpāiguri, Rajganj and Bodā from Rangpur and uniting them to the Western Duārs. Conditions in the area separated from Rangpur differ little from those in that district and in the adjoining district of Dinājpur; the Western Duārs, on the other hand, is a submontane tract of country stretching along the foot of the hills between the Tīsta and Sankos rivers. The annual rainfall varies greatly in different parts of the district ranging from 70 inches at Debiganj in the Bodā pargana to 130 inches at Jalpāiguri in the regulation part of the district, while in the Western Duārs, close to the hills, it exceeds 200 inches per annum. In these circumstances it is not possible to treat the district as a whole and give one account of agriculture which will apply to all parts of it.

The river Tīsta divides the district into two parts; to the west the country is that of an ordinary plains district in North Bengal diversified only by the Bāikanthpur Forest in the north which covers an area of eighty-one square miles. The land is generally fertile and grows good crops of rice and jute; it is least productive in the neighbourhood of Ambāri Fālākātā where it is high and there is comparatively little water. The Western Duārs comprises an area of 1,968 square miles, of which 509 square miles, or more than a quarter of the whole area, are occupied by reserved forests. In the north, at the foot of the hills, lie numerous tea-gardens; so quickly has the industry grown that it is now possible to ride forty miles from garden to garden without interruption. Before the annexation of the Duārs this part of the country was covered by huge stretches of grass and reed jungle interspersed with forest and with a very scanty population; now it is the seat of a prosperous industry on which nearly a sixth of the population of the district depend for a living. Below the tea-gardens, as far south as the Cooch Behār border, lie rich fertile plains growing splendid crops of rice, jute, tobacco and mustard. Towards the east, there is still much waste land, but, at the present rate of progress, it will not be long before this is brought under cultivation.

Tea is the most valuable crop grown in the district, but as its manufacture is a special industry carried on mainly by European planters, it will be more convenient to give an account of it in a subsequent chapter. This chapter will, therefore, contain only an account of native agriculture.

AGRICULTURAL POPULATION AND STATISTICS OF AGRICULTURE.

More than 700,000 persons or over 89 per cent of the population are supported by agriculture, a larger proportion than in any district in Bengal (before the partition) except the Chittagong Hill Tracts. Figures for the year 1907-08 are given in the margin. The most striking features of recent years are the spread of cultivation in the Western Duārs and the increase in the area under jute, in some parts of the district at the expense of the *aus* rice crop. In 1906-07 the price of jute ruled very high and in the following year cultivators grew large quantities of it; prices, however, fell and they did not make as much profit as they had expected to do. This year there has been a tendency to restrict the area under jute and grow more rice; the people say that it is little use getting high prices for jute if they have to spend the money afterwards in buying rice for their own consumption.

	Sq. miles.
Total area of the district ...	2,961
Forests	509
Not available for cultivation ...	385
Cultivable waste other than fallow	616
Current fallow	42
Net area cropped during the year ...	1,409

The alluvial soil with which the greater part of the district is covered is very fertile; west of the Tīsta a superior variety of jute, known as Rājganja, is grown; fine rice and sugar-cane are also produced. In the low lands throughout the Western Duārs coarse rice and jute grow abundantly and between the Tīsta and Torsā rivers very fine crops of tobacco are produced.

Irrigation.

Artificial irrigation is not infrequent in the Western Duārs where the number of rivers and streams afford great facilities for it. It is used for land on which *āman* rice is grown, but which is not sufficiently low to ensure an adequate supply of water by ordinary means. The cultivators cut small irrigation channels, locally called *jampois*, from any stream which seems suitable and their proceedings need careful watching as the rivers in the Duārs frequently change their courses and it does not require much to divert the whole of the water from a river or stream down an irrigation channel. Cases have occurred in which the digging of irrigation channels has resulted in great damage to the Bengal Duārs Railway and to roads. An irrigation channel near Gāirkātā had to be closed up because it threatened to divert the course of the Angrabāshā river and leave the Gāirkātā tea-garden, with its turbine driven machinery, and the Gāirkātā market without any water-supply. Irrigation is doubtless necessary in parts of the Western Duārs, but it is not safe to allow channels to be dug without supervision; the cultivators think only of the benefit of getting water for their fields and are not intelligent enough to foresee the result of what they do.

Extension of Cultivation.

In the permanently settled *parganas* of the district most of the available land is under cultivation and there is not much room for extension; a very large area is, however, capable of growing two

crops if the people choose to sow them and in 1907-08 the area cropped more than once was 198,700 acres. In the opinion of the Manager of the Chaklajāt Estates, which belong to H. H. the Mahārājā of Cooch Behār, nothing but the want of energy of the people prevents the land being double-cropped. In the Western Duārs, cultivation is extending rapidly and would extend at an even faster rate if more labour was available. In 1901-02 the area under jute was 59,800 acres and under tobacco 112,900 acres; by 1907-08 the figures had risen to 125,500 for jute and 119,400 for tobacco; most of the increase in the area under jute and nearly all in that under tobacco has taken place in the Western Duārs.

SOILS. The greater part of the district is covered with alluvium ranging from pure sand to clay. Over most of the district the soil is a sandy loam, but in the basin between the Tīsta and Jaldhākā rivers it is hard, black, and clayey; excellent bricks and earthenware can be made in this part of the country and the land furnishes good pasture and fine crops of tobacco. In the uplands to the north of the Duārs the soil is a ferruginous clay and is particularly well suited to the growth of the tea plant. The Western Duārs contains numerous old river-beds which have been deserted by the streams which used to flow along them; near the hills they are strewn with stones and boulders, lower down they contain gravel and, in the plains, sand. These deserted river-beds are unprofitable wastes, of little use to any one.

PRINCIPAL CROPS. The total area under cultivation in 1907-08 was 901,900 acres or about 50 per cent of the area of the district. Excluding tea, the principal crops are rice, jute, tobacco and mustard.

Rice. By far the largest part of the area under cultivation is under rice; the area under this crop in 1907-08 was 631,600 acres. In spite of the great increase in cultivation in the Western Duārs, the area under rice has decreased since 1901-02 when it was 637,000 acres. The decrease is entirely due to the increased area under jute.

There are two main crops of rice: the *āman* or *hāimantik* which is reaped in the winter and the *aus* or *bhadoi* which is harvested in August and September. The winter rice is much the more important crop; *bhadoi* rice is usually kept by the cultivators for their own consumption. *Aman* rice is first sown broadcast in nurseries in May and June and from about the middle of July to the middle of September is transplanted into fields which have been specially prepared for it. These fields are situated in low-lying land called *rupit* and are surrounded by small *bands* or ridges to retain the water. They are usually ploughed four times; the first ploughing is straight up and down the fields; after a week or ten days the second ploughing is done crossways. The other two ploughings follow at intervals of about two days. By the time these ploughings are finished the ground is worked up into soft pulpy mud and the seedlings are then

transplanted into it. The young plants are put into the ground by hand, two or three together, at intervals of from six to nine inches. Once the rice has been transplanted nothing more is done until it is ripe and ready for harvest. The average outturn of *āman* rice is about 20 maunds an acre, but some of the lands in the Western Duārs yield considerably more than this.

Bhadoi rice is grown on higher land called *faringati*. Preparation of the land begins in February; it is ploughed six to eight times and then levelled. The weeds are collected and burnt, the ashes acting as manure to the soil. After this the seed is sown broadcast and the land slightly ploughed up twice and again levelled. When the young plants are about four inches high the fields are weeded and the crop thinned out with a rake. The outturn of *bhadoi* rice is less than that of *āman* and varies from sixteen to twenty maunds an acre.

Threshing is done with the aid of bullocks. After the crop has been brought in from the fields, the bundles of paddy are opened and spread in the courtyard and five or six bullocks are driven round and round over them. In three or four hours the grain separates from the straw and is carefully winnowed and cleaned. In the Sadar subdivision the straw is stored for the use of cattle, but in the east of the district grazing is so abundant that hardly any use is made of it. In the Western Duārs cows are often used for threshing instead of bullocks.

Jute.

The cultivation of jute has increased at a very rapid rate and the area under this crop has more than doubled in the six years between 1901-02 and 1907-08. In the regulation portion of the district the increase has been at the expense of the *bhadoi* rice crop, about 25 per cent of the land which used to grow *bhadoi* rice being now devoted to the production of jute. The greater part of the increase has, however, taken place in the Western Duārs. In 1895, when Mr. Sunder submitted his settlement report, the area under jute was only 6,620 acres and the crop was confined to the Māinagurī *tahsīl* and grown mainly in the neighbourhood of the Krānti outpost. It has now spread throughout the Western Duārs; large areas of land are under it in the vicinity of Madāri Hāt, the eastern terminus of the Bengal-Duārs Railway, and it is fast extending into the Alīpur *tahsīl*. The best variety of jute is that produced in the Rājganj police circle, but the quality of the fibre is good throughout the district.

The same class of land which is suitable for *bhadoi* rice is also used for growing jute. The land is well ploughed in March and April for about five or six days and the seed is then sown broadcast; one seer of seed is usually sufficient for a *bigha* of land but, if a field is covered with grass or weeds, two seers of seed to a *bigha* are sown. When the crop is a few inches high, the fields are cleared of jungle with a large rake, which also serves to thin out the plants. After the jute has grown to a foot or eighteen inches high, it is

again weeded by hand and is then left untouched until it is ready to cut.

By the month of August or September jute is from six to ten feet high and it is then cut and tied into bundles. After all the jute in a field has been cut, it is removed to a piece of high ground where the bundles are laid one on top of another, the leaf end of each bundle resting on the stalks of the bundle below it. The heap of bundles is covered with straw until, in about three days, the leaves dry up and can be shaken off. The plants are next taken to some shallow stagnant water and steeped for three weeks or a month, by the end of which time the bark begins to separate and the stalk and fibre become soft. The jute is then taken out of the water; the plants are broken off about two feet from the bottom and the stalks are removed. The fibre is dried in the sun and cleaned until it is fit for the market. The lower part of the jute stalks, which is broken off in order to extract the fibre, is used for fuel; the upper part is used to make fences for the protection of crops, such as tobacco and vegetables, which are grown near homesteads.

Suitable weather after jute is sown is essential to the proper growth of the crop. Prolonged fine weather causes the young plants to wither and they either die out altogether or become stunted. Too much rain after the seed is put into the ground makes it rot and the sowing has to be done over again. The only other necessity is plenty of water at the time when the jute is steeped; the heavy rainfall of the Jalpāigurī district almost always ensures this, but occasionally in the south of the district in the Bodā police circle, there is not enough water, with the result that every pool and pond is used over and over again, and the fibre becomes black and loses the silky appearance which it ought to have.

Tobacco.

Tobacco is a very valuable crop and is grown largely in the Western Duārs, the best tobacco lands lying between the Tīsta and Torsā rivers. The crop requires careful cultivation and much labour to bring it to perfection; the results of all the industry bestowed on it may be lost in a few minutes if hailstorms occur in January or February just before the leaves are ready for plucking. In February 1905 three-quarters of a fine crop of tobacco were destroyed by two nights' frost which withered the leaves.

The crop is grown on good *faringati* land situated near the homestead of the cultivator. The land is carefully cultivated and all the available manure, consisting of cowdung and ashes, is put into it. The seed is sown in nurseries in July and August and the young plants have to be shaded carefully to protect them from the sun. Transplanting is done in October and November, the seedlings being placed in lines about two feet apart. The fields have to be kept well weeded and the crop requires constant attention until the leaves are ready for plucking in February and March

The yield of an acre of land is from six to eight maunds of tobacco and the market price ranges from six to twelve rupees a maund; the average price of good tobacco may be taken to be about eight rupees a maund.

Mustard.

The area under mustard in 1907-08 was 27,700 acres. The crop gives little trouble to the cultivator and does not require much attention. The seed is sown broadcast in October and November and the crop is reaped in February or March.

Other crops.

Among other crops may be mentioned sugar-cane which is grown chiefly near Pochagarh in the Bodā pargana, though small plots of it may be found in the Western Duārs; maize which covered 3,400 acres in 1907-08 and is cultivated mostly by ex-tea-garden coolies, wheat, barley and potatoes. Ginger is grown occasionally in the Bodā pargana, but, though it is a valuable crop, it exhausts the soil and the cultivators do not care about it. Cotton used to be grown in some quantity by Meches and Gāros in high lands towards the foot of the Bhutān hills, but the opening of the tea-gardens and the introduction of forest conservancy has put a stop to their wasteful method of cultivation by juming and in 1907-08 only 100 acres were under this crop. It is probable that the cultivation of cotton will die out entirely in a few years, as the opening up of the district is forcing the Meches to abandon their migratory habits and to settle down to ordinary cultivation.

IMPROVEMENTS IN AGRICULTURAL PRACTICE.

No improvements in agricultural practice call for notice except the abandonment of cultivation by juming by the Meches. The abundant rainfall and fertile lands of the district yield magnificent crops of rice and jute with very little exertion on the part of the cultivator and, as long as he can obtain all he wants without much effort, he has little incentive to adopt improved methods of cultivation.

AGRICULTURAL IMPLEMENTS.

The agricultural implements in most common use among the cultivators are the following:—*hāl* or wooden plough; *phal* or ploughshare; *kodāli* or spade; *kurāli* or hatchet for splitting wood; *dāo*, a large knife or bill-hook; *khurshā* or *dhelābhāngā*, a wooden mallet for breaking up clods of earth; *māi*, a bamboo harrow for levelling the fields; *bidā*, a large bamboo or wooden rake for thinning and weeding the fields; it is usually drawn by bullocks; *khānti*, an iron crowbar for making holes in the ground; *kānchi* or *kachi dāo*, a sickle or reaping hook; *dāokā* or *pāsar*, a rake for weeding. A set of these implements, together with a pair of plough bullocks, are required to cultivate what is technically known as a *hāl* or plough of land, equivalent to about five English acres.

CATTLE.

The local cattle are small and weakly and no attempt has been made to improve the breed. An imported bull has been bought recently for the Jalpāigurī jail, but his services will be confined to the jail cows. Owing to the damp climate of the

Western Duārs, mortality among cattle is very great and it is not uncommon after a severe epidemic to see cows used for ploughing. Pasturage is abundant; in the northern *taluks* of the Western Duārs green fodder is always available and paddy straw is not used for cattle. Meches and other cultivators throw away the straw as soon as they have finished threshing or allow anyone who pleases to take it away. In the regulation *parganas* and in the southern *taluks* of the Western Duārs straw is stored for fodder and cattle are fed on it while the *āman* rice is growing and they cannot be allowed to graze in the fields. During the winter months large herds of buffaloes from Purnea, Rangpur and Cooch Behār are grazed in the reserved forests and in the waste lands of the Fālākātā and Alīpur *tahsīls*. Buffaloes are seldom used for agricultural purposes; the professional graziers keep them for milk, most of which is made into ghee. Although there is no lack of pasturage in the district taken as a whole, sufficient grazing lands near the homesteads of the cultivators have not been reserved in all parts; the want of these is particularly felt in the *pargana* of South Māinagurī. In the Bhālka *tahsīl* there are plenty of grazing lands, but the mistake has been made of not reserving tracks leading to them and cultivators naturally object to cattle being driven through their crops in order to reach the pasture grounds It is hoped to remedy both these defects during the settlement which is now in progress.

Veterinary aid.

A Veterinary Assistant is stationed at Jalpāigurī and paid by Government. His duty is to tour in the interior of the district and do what he can to deal with outbreaks of epidemic disease. The most common disease is rinderpest, which causes great mortality among wild animals as well as among cattle and buffaloes; much can be done during an epidemic by inoculation with a specially prepared serum to save uninfected animals and to check the spread of the disease. Unfortunately the cultivators are conservative and suspicious and are very loth to submit their animals to treatment; on the tea-gardens, the influence of the Managers is usually sufficient to induce the coolies to allow their cattle and buffaloes to be inoculated, and much loss has been prevented in this way. During 1907-08 the Veterinary Assistant inoculated 2,417 animals against rinderpest, nearly all of which belonged to tea-garden coolies.

CHAPTER VI.

FORESTS.

GENERAL DESCRIPTION.

The forests of the Jalpāigurī district are numerous and valuable and cover an even larger area than those of the adjoining district of Darjeeling. In addition to the reserved forests, which are situated entirely in the Western Duārs between the Tīsta and Sankos rivers, there is a large forest measuring 81 square miles, west of the Tīsta, which belongs to the Rāikat of Bāikanthpur. All the forests are plains forests, with the exception of about 45 square miles in the vicinity of Buxā which occupy hilly ground rising rapidly from 500 to 4,000 feet. The principal timber tree, the importance of which is so great that the working of all reserved forests is directed towards obtaining a maximum quantity of mature timber from it, is *sāl (Shorea robusta)*; in some parts it grows nearly pure, but it is more often mixed with a large number of other species. The great difficulty experienced in dealing with the forests is to ensure natural reproduction of *sāl* and at the same time to protect the forests from fire. The Bāikanthpur forests, which received little attention from its owners and was until recently burnt through every year to ensure good grazing for cattle and buffaloes, contains hardly a tree which is not twisted and blackened by fire; at the same time this repeated burning has destroyed the soft wood trees and dense herbaceous undergrowth which spring up faster than *sāl* and choke and kill the young trees, so that the natural reproduction is excellent and young *sāl* plants abound in every direction. In the Government forests, on the other hand, the work of fire-protection has been carried out carefully, with the result that, though the larger trees have been preserved, the dense undergrowth has seriously interfered with the growth of the young plants and natural reproduction has not been as satisfactory as could be wished. Possibly some method will be found of giving adequate protection from fire without discouraging the natural reproduction of *sāl*. In addition to the tree bearing area a considerable area of savannah lands is included within the boundaries of the reserved forests. These grassy savannahs are a source of danger to the adjoining forests owing to their extreme inflammability, particularly when tortuous natural boundaries make it difficult to burn the outside grass, and near tea-gardens when the Managers object to the early burning of grass on their grants. In addition to the reserved forests there were until recently 5 square miles of protected forests in the Māinagurī and Fālākātā tahsils, which were managed by the Civil Department. As they could not be properly protected and worked they have been handed over to the Forest Department in exchange

for a corresponding area of land which contained little timber and was suitable for cultivation.

ADMINISTRATIVE DIVISIONS.

All the forests in the district are at present controlled by the Forest Department, for the Bāikanthpur Forest has been placed under the Deputy Conservator of Forests, Jalpāigurī division, since the estate came under the Court of Wards. The reserved forests are divided for administrative purposes into two divisions, the Jalpāigurī and Buxā divisions, the head-quarters of which are at Jalpāigurī and Buxā, though the working centre of the Buxā forests is at Rājābhātkhoa, the station north of Alīpur Duār on the Cooch Behār Railway. The forests of the Jalpāigurī division lie between the Tīsta and Torsā rivers while those of the Buxā division are situated east of the Torsā in the Alīpur Duār subdivision.

JALPAIGURI DIVISION.

The forests of the Jalpāigurī division cover an area of 182 square miles and are situated entirely in the plains at the foot of the Bhutān hills. They are divided into four ranges, Apalchand, Lower Tondu, Upper Tondu, and Maraghāt and consist of 12 isolated blocks, the names and areas of which are given below :—

	Area in sq. miles.
(1) Apalchand	28·67
(2) Mālhati	·50
(3) Khāirānti	·10
(4) Upper and Lower Tondu ...	79·03
(5) Dāina	25·01
(6) Maraghāt	21·50
(7) Rehti	5·10
(8) Dalgāon	2·30
(9) Sālbāri	·03
(10) Dumchi	4·71
(11) Khāirbāri	2·88
(12) Titi	12·76

Character of the forests.

The only tree of importance for timber in this division is *sāl* (*Shorea robusta*). Other timber trees which are fairly numerous are *chilauni* (*Schima wallichii*), *sissu**(*Dalbergia sissu*), *khair* (*Acacia catechu*), *kāinjal* (*Bischopia javanica*), *malagiri* (*Cinnamomum cecidodaphne*) and *simul* (*Bombax malabaricum*); but few trees of large size, belonging to these species, are to be found. The forests may be divided into four types, *viz:*—*Sāl* forest, Mixed, Evergreen, and Savannah; but these types merge into one another and are found in many places inextricably combined. The *sāl* forest is in some parts nearly pure, with as many as 200 stems to the acre, but is more often mixed with varying proportions of other species, including *tatri* (*Dillenia pentagyna*), *udal* (*Sterculia villosa*), *saj* (*Terminalia tomentosa*), *kumbi* (*Careya arborea*), and *chilauni* (*Schima wallichii*). There are approximately 7,911 acres of *sāl* in Apalchand, 161 acres in Mālhati, 42 acres in Khāiranti, 9,403 acres in Lower Tondu, 3,997 acres in Upper Tondu, 4,293 acres in Maraghāt, 484 acres

in Dalgāon, 244 acres in Dumchi, and 16 acres in Sālbāri. In the mixed forest, of which the greater part of Upper Tondu and Dumchi and the whole of Rehti and Titi are types, the soil is usually strong and the ground lower than that occupied by *sāl* forests. *Sāl* is found scattered here and there, and in the vicinity of river-beds the forest gradually turns into *khair* and *sissu* forest; the ground is often covered with a dense undergrowth of shrubs and creepers. The principal species found are *Lagerstrœmia parviflora*, *Calicarpa arborea*, *Sterculia villosa*, and *Terminalia tomentosa*; the northern part of the Upper Tondu forest is mainly composed of *Schima wallichii* which often grows to a large size The evergreen forest occurs in old alluvial soil in all depressions such as the sides of *jhoras* and small rivers which are not occupied by grass. The species are very numerous and include *Luginia*, *Glœocarpus*, *Echinocarpus*, *Michelia* and canes. The large grassy blanks in the forests are called savannahs and are important on account of their extent and of their bearing on the work of fire protection. In many of them settlers have been allowed to form forest villages, and to cultivate the land at a low rent on condition that they supply labour to the Forest Department when called upon to do so. Other savannahs have been sown with *mallota* which grows quickly and is useful in killing off the grass and preparing the way for the introduction of mixed forest.

Forest management.

The selection of forests for reservation was begun in 1872-73 and from that time to 1878-79 various forests were gazetted as reserved. The northern Tondu block was transferred from the Darjeeling district in 1881 and now forms part of the Upper Tondu forest. There was very little mature timber in the forests at the time when they were reserved as all big trees had been cut and removed previous to the annexation of the Western Duārs; it was decided, therefore, not to work the forests for 25 or 30 years except to remove dry or fallen trees. In practice, however, it has not been possible to adhere to this policy; urgent demands arose which had to be satisfied and a sort of compromise was effected by which the forests were preserved as far as was compatible with the supply of urgent requirements. For many years there was little demand for fuel from tea-gardens as they were able to satisfy their needs from the large stocks of firewood on their grants, but as early as 1883 some of them began to draw on the reserves for fuel. In 1891-92 a free grant of mature trees was made to the Bengal-Duārs Railway Company for sleepers when the original line was constructed; the value of this concession was estimated at Rs 30,000. The first working plan for the whole of the Jalpāigurī division was drawn up in outline in 1892-93 by Mr. Manson and a working plan, completed by Mr Haines in 1896, was sanctioned in 1899 for ten years with retrospective effect from the date of its completion. This working plan remained in

force until 1905 when a revised plan was drawn up by Mr. Trafford and sanctioned by the Bengal Government. The main principle adopted was to provide as large a quantity of fuel as possible for the tea-gardens and at the same time to obtain a fair supply of large timber trees; the sylvicultural method proposed was coppice with standards, promising *sāl* and other species which would provide saleable timber being reserved as standards. The period of rotation was fixed at 25 years for the coppice and at 100 years for the standards.

Forest produce.

The neighbouring *raiyats* take fodder for cattle, dry wood for fuel, and grass and leaves from the forests. The whole of the regular outturn of fuel is taken by the tea-gardens, but the forest area is not large enough to supply the demand. Some gardens near the Darjeeling boundary obtain their supply of fuel from the Tīsta forest division but, when gardens are not near the forests, or are remote from the part of the forests where cuttings are taking place, it is cheaper for them to use coal which can easily be obtained as the railway runs close to most of the gardens. Very few tea gardens have any fuel supply of their own left now. In the *sāl* area the system of working is that of improvement fellings; mature trees, bad trees, and trees with large crowns, which interfere with the growth of a number of others are marked for felling the other species are cut by the tea-gardens for fuel. Steps are being taken to ensure a sufficient growth of young *sāl* by cleanings and weedings in places where seed has fallen and by freeing the heads of young trees, which are being suppressed by creepers or trees of inferior species. One-fifteenth of the *sāl* area is cut over annually. In the mixed forest the method of working is coppice and standards, one-twentieth of the area being cut over annually. The whole of the coppice fellings are taken by the tea-gardens for fuel. The *sāl* timber is sold to private purchasers on payment of a monopoly fee. Trees fit for cutting are marked in each range and tenders are called for; the person whose tender is accepted has the sole right of felling the marked *sāl* timber in that range. A date is fixed by which all the marked timber in a range must be cut and removed, the monopoly fee is payable in instalments and the price of the timber is realised before it is taken away from the forest. The areas over which fellings take place are divided into sections in proportion to the requirements of the tea-gardens, and the fuel is removed by the garden authorities and measured at the factory or other place where it has been stocked. There is no minor produce of any value except long pepper (*Piper longum*), small quantities of which are collected departmentally.

Protection

The danger from fire is not great. In 1900-01 about nine square miles of forests were burnt, but with the exception of that year, the annual average area burnt has been only one square mile from 1896-97 to 1903-04. The whole of the forests are protected

and, during the fire season which lasts from the 15th February to the 31st May, fire patrols are appointed. Elephants, which are increasing in numbers in the district, are very troublesome; they trample down and destroy young trees, interrupt work and do much damage in the forest villages. Forest offences are neither numerous nor serious, the majority being cases of cattle trespass.*

BUXA DIVISION.

The reserved forests of the Buxā division are very compact, there being only three separate blocks which are less than ten miles distant from one another. The total area of the forests is 327 square miles, about one-seventh of which is hill forest situated on the outer slopes of the Himālayas; the remainder is plain forest and occupies level or slightly undulating ground at the foot of the hills. The forests are divided into three ranges, Buxā, the area of which is 180·4 square miles, Borojhār 93·5 square miles, and Haldibāri 53·1 square miles.

Character of the Forests.

As in the Jalpāigurī division the most important tree is *sāl* (*Shorea robusta*) which occupies about half the area of the forests and is mixed with a varying proportion of other species among which are *sidha* (*Lagerstrœmia parviflora*), *udal* (*Sterculia villosa*), *chilauni* (*Schima wallichii*), *mallota* (*Macaranga denticulata*), *jaman* (*Eugenia operculata*), *bahera* (*Terminalia belerica*), *simul* (*Bombax malabaricum*), *tatri* (*Dillenia pentagyna*), *parari* (*Stereospermum chelonoides*), and occasionally *tun* (*Cedrela toona*) and *lampatia* (*Duabanga sonneratioides*). The total *sāl* producing area is about 87,000 acres, of which 85,000 are situated in the plains; in the hills *sāl* trees are scattered along the crests of the ridges and there is mixed forest in the intervening valleys. After the *sāl* the principal timber trees are *khāir* (*Acacia catechu*) and *sissu* (*Dalbergia sissu*).

The forests fall naturally into three main types—*sāl* bearing areas, *khair* and *sissu* bearing areas, and mixed forest areas and savannahs; in addition to these, unproductive river-beds occupy an area of about 11,000 acres. The *sāl* bearing areas vary from canopied high forest to thinly scattered trees in tangled scrub and creeper jungle. The growth is generally good but is much handicapped by creepers, which have almost ruined parts of the forest; these creepers seriously impede natural reproduction and in some places suppress and half strangle the existing trees. In the Buxā forest south of the 22nd mile line the drainage is not good and a rather large percentage of the exploitable trees are unsound. *Khair* and *sissu* trees are generally mixed with other species such as *Albizzia*, *Bombax*, *Lagerstrœmia*, *Oroxylum*, *Butea*, *Premna*, and *Callicarpa*, and are mostly immature, though there is a moderate supply of old trees ranging from 4 to 6 feet in girth. Reproduction is good in the well stocked areas, but elsewhere though *sissu* reproduction, mainly from root suckers, comes up, it

* I am indebted to Mr W. R. LeG. Jacob, Deputy Conservator of Forests, for assistance in preparing this account of the Jalpāigurī division.

is burnt back by the frequent fires and well established poles and saplings are rare; the older trees are much damaged by fire, most of them being half burnt through. Creepers are bad in places where fire protection has been successful. The mixed forests consist chiefly of species of *Lagerstrœmia*, *Bombax*, *Sterculia*, *Callicarpa*, *Dillenia*, *Schima*, *Premna* and *Bauhinia* in the plains, and *Schima*, *Tertrameles*, *Magnolia*, *Duabanga* and *Cedrela* in the hills. A little bamboo is found in the hills but none in the plains forest. Reproduction is good but creepers give much trouble. In the savannahs the soil is usually poor and sandy, but these areas are for the most part rapidly filling in with tree species. In recent years it has been found necessary to form forest villages in order to augment the supply of labour.

Forest management.

The forests have been selected out of unoccupied waste at the disposal of Government. The first notification was published in 1879 when nearly 280 square miles of country were declared to be reserved forest; since that time other tracts have been added, the latest addition of importance being the Sachaphu forest containing 18 square miles which was reserved in 1905. The forests of this division had been in charge of the Forest Department since 1866, but no attempt at systematic working was made until 1874-75. From 1875 to 1888 nearly all the exploitation work was done departmentally, purchasers removing only a few thousand rupees' worth of *sāl* timber annually; during the next ten years departmental work was almost suspended and purchasers removed nearly the whole of the small outturn obtained from the forests. In 1899-1900 departmental operations began again and sleepers were supplied to the Eastern Bengal State Railway.

The present working plan was drawn up by Mr. C. C. Hatt and was finished by him in April 1905; it divides the forests into five working circles, namely, Buxā, Borojhār, Nilpārā, Haldibāri, and Bhutān ghāt. The principal object aimed at in the Buxā, Borojhār aad Haldibāri working circles is to supply a maximum quantity of mature *sāl* timber; in the Nilpāra and Bhutān ghāt circles efforts are directed to utilise the stock of damaged and over-mature *sissu* timber. In the three circles which mainly supply *sāl* timber the high forest selection method has been adopted. Improvement fellings are also necessary: unsound and unpromising *sāl* trees under 2 feet diameter are cut when they interfere with the development of the better specimens, and trees of other species are cut when they interfere with *sāl* or trees of other species more valuable than themselves. In the Nilpārā and Bhutān ghāt working circles over-mature and badly damaged trees are cut as they can be disposed of.

Forest produce.

There is little demand for forest produce from the local population. The gardens can obtain nearly all the timber and fuel which they require from their own grants which are very large; the cultivators want only bamboos and small poles for building,

both of which they can obtain from the waste lands under the management of the civil authorities. There is plenty of grazing ground outside the forests. *Sāl* timber is the chief marketable product; there is an almost unlimited demand for metre gauge *sāl* sleepers from the Eastern Bengal State, Bengal and North Western, and Bengal-Duārs Railways. Dacca and other places in Eastern Bengal take most of the heavy *sāl* timber which is not cut into sleepers; it is taken by local purchasers to Alīpur Duār where it is sold to merchants, most of whom come from Dacca and Rangpur. There is a limited demand for good *sissu* timber for the Calcutta market and tea-gardens take a little *sissu* for box planking. There is considerable difficulty in dealing with the produce extracted from the forests owing to the inability of the Cooch Behār Railway to carry it; the line is 2′ 6″ gauge and not only is its carrying capacity small and its rolling stock limited, but the timber has to be handled again at the Gitāldaha Junction where it joins the Eastern Bengal State Railway. The conversion of the line to metre gauge, which it is hoped to effect in the next few years, will greatly facilitate the working of the forests. Most of the timber is now carted to Alīpur Duār and floated thence to the markets in Eastern Bengal; the cart road which runs parallel to the railway, and is not metalled, is unable to bear the heavy traffic, and is in a bad state of repair.

Protection.

Successful fire protection has rendered the *sāl* bearing areas much less inflammable than formerly and the only kind of fires to be apprehended in them are leaf fires during the hot weather which are not likely to cause much damage. In the *khair* and *sissu* bearing areas and savannahs the danger from fire is still very great. Mention has already been made of the damage done by creepers and attempts have been made to cut them. The area cleared annually from 1877-78 to 1901-02 averaged only 7 square miles; since 1901-02 an average annual area of 38 square miles has been cleared. A first creeper cutting throughout the *sāl* areas in the Buxā forests was finished in 1904-05 but so far only creepers on *sāl* trees have been cut. Elephants are very troublesome and do considerable damage; in the Buxā forest the Telegraph Department has been compelled to fasten the wire high up on large trees as the elephants pulled up all the telegraph posts.

FINANCIAL RESULTS.

The working of the Jalpāigurī division did not begin to show a steady profit until 1893-94 and in the Buxā division the expenditure exceeded the revenue in 13 out of the 22 years from 1882-83 to 1903-04. During the last four years both divisions have been doing well and have made handsome profits. The table below gives the figures for the last ten years :—

Year.	Jalpaiguri Division.			Buxa Division.		
	Revenue.	Expenditure.	Nett profit.	Revenue.	Expenditure.	Nett profit.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1898-99 ...	54,568	24,131	30,427	17,452	23,315	...
1899-00 ...	56,780	34,378	22,402	28,826	33,683	...
1900-01 ...	55,345	37 101	18,244	43,228	37,135	6,093
1901-02 ...	56,774	44,918	11,856	62,675	40,032	22,643
1902-03 ...	68,621	41,089	27,532	57,334	55,917	1,417
1903-04 ...	55,199	31 738	23,461	63,255	76,694	...
1904-05 ...	88,521	50,434	38,097	1,20,789	84,783	36,006
1905-06 ...	99,403	43,807	55,596	1,32,434	91,671	40,763
1906-07 ...	1,33,630	48,740	84,890	2,15,037	97,351	1,17,686
1907-08 ...	1,04.730	41,662	63,068	2,20,893	1,21,220	99,673

It will be seen that in 1906-07 the two divisions between them made a surplus of over two lakhs of rupees, and in 1907-08 of over one and a half lakhs. The forests have been carefully preserved by the Forest Department and the result of the good work done is becoming apparent; the Buxā division is capable of still further development but its working is hampered by the difficulty experienced in getting the timber to the markets of Eastern Bengal and Calcutta.

The Bāikanthpur forest is situated on the west bank of the Tīsta river and forms a long narrow strip stretching from the boundary of the Darjeeling district to within a few miles of Jalpāigurī. The following description of the forest is taken from Dr. Buchanan-Hamilton's M. S. Account of Rangpur written in 1809 :—' The woods of Battris-hazāri or Bāikanthpur have been nearly exhausted of *sāl* and *sissu*, the only trees that are cut for exportation, although they contain a great abundance of timber in reality, perhaps, more valuable. Still, however, some people are employed partly in these woods and partly in those which are adjacent to the territories of Bhutān and Nepāl. I shall give here an account of the whole, as I have no means of distinguishing between the quantity procured in each. The woods of Bhutān that are near the rivers are as much exhausted as those in the Company's territory, so that the greater part of the timber is brought from Nepāl ; and none is cut at a further distance than three miles from some branch of the Tīsta or Karātoyā,

THE BAIKANTHPUR FOREST.

by which the logs can be floated into these rivers. In places where the ground is quite level, the logs are placed on two small wheels, and dragged by men; where the ground is broken or uneven they are carried. Cattle are never employed so that no large log is ever procured; and the felled trees are cut up into pieces which are shorter and shorter in proportion to their girth, in order that the weight of all the logs may be nearly equal. No timber is cut except when commissioned, and the value is always paid in advance. The purchases are mostly made by native merchants from Debiganj in this district, and from Kangtāpukhurī in Nator; the timber is intended chiefly for building boats. The advances are made to men called *dafadars* who employ workmen at monthly wages; and each of them contracts to deliver what is called a *dhura* of timber at a specified place on a river bank, from which it can be floated down stream. The logs are merely freed from the branches and bark; the trees having previously been cut two or three feet from the ground, as more convenient for the stroke of the hatchet, the use of the saw being unknown, and the waste of timber being considered of no consequence. The stem of the tree is cut into as many lengths in proportion to its thickness as it will admit, and the tops and large branches are left to rot, or to be carried off by any person who chooses.'

The working of this forest has been supervised by the Divisional Forest Officer, Jalpāigurī, since 1905; cultivators and graziers offered great obstruction to the proper working of the forest as they objected to the interference with their former pleasures of "shikar" and burning the forest at will. In June 1908, on the application of the Manager of the Estate which is under the Court of Wards, a preliminary notification was issued for the reservation of the forest. The forest has been grazed and burnt excessively for many years, but there still remains a large amount of *sāl* chiefly poles, and with care and protection it will become in time once more a valuable property. The higher ground is stocked with *sāl* poles which show signs of many fires, and there is a complete absence of the thick undergrowth which characterises the adjoining Government forests; underneath the *sāl* is grass and, in the grass, an enormous number of young *sāl* seedlings have sprung up since the forest has been protected from fire. The low-lying parts are covered with low scrub jungle with little timber of any value.

The forest is being divided into two ranges, the Sārogārā range in the north and the Shikārpur range in the south. The revenue is derived mainly from the sale of dry and dead *sāl* poles and from grazing; a small amount of fuel is also sold. In 1906-07 the revenue was Rs. 28,893, and the expenditure Rs. 4,560, giving a surplus of Rs. 24,333; this compares well with 1870 when the proprietor farmed out the whole tract at a rental of Rs. 3,000 per annum.

DEFORESTATION OF SIKKIM AND BHUTAN.

Before leaving the subject of the forests, it is desirable to refer to a suggestion made in 1906 that floods in the Western Duārs had increased in recent years and had done more damage owing to the practice of *juming*, or shifting cultivation, on the watersheds of the destructive rivers. There is no doubt that large areas have been deforested in this way in Sikkim and Bhutān, but there is nothing to show that floods are worse or more frequent now, than they used to be in former years. The general consensus of opinion in the district is that *juming* has had little or no effect on the quantity of water which goes into the rivers and cannot be responsible for causing the floods of recent years. The floods in 1902 and 1906 were caused by heavy rainfall coming at a time when the rivers were full and the soil so saturated that it could not retain more moisture; in 1902 there was exceptionally heavy rain in September following an August in which the rainfall was quite up to the average; in July 1906 the rainfall was above the normal and was followed by unusually heavy rain in August. In both cases the rivers were full and the soil saturated when further heavy rain added volumes of water which could not be retained by the land and which the already swollen rivers were unable to carry off.

CHAPTER VII.

NATURAL CALAMITIES.

Owing to its position at the foot of the hills and to the number of rivers and streams which flow through it, the Jalpāiguri district has always been peculiarly liable to floods. Mention has already been made of the disastrous floods in 1787 when the Tīstā river, which used to flow into the Ganges, suddenly deserted its channel and turned its waters into a still more ancient bed by which it empties itself into the Brāhmaputra in the Rangpur district. The numerous deserted river-beds which may be seen throughout the district and particularly in the Western Duārs show the facility with which the rivers change their courses, often as the result of a sudden flood caused by heavy local rain in the hills. There were serious floods on the river Tista in 1881 and 1892, but the worst floods in recent years occurred in 1902 and 1906.

FLOODS IN 1902.

The flood in 1902 was confined to the basin of the Tīsta river and was caused by general and extremely heavy rain in the Darjeeling hills on the 27th September. Darjeeling itself reported a rainfall of 12 inches for the 24 hours and the downpour was even heavier in other places in the hills. The rainfall at Jalpāigurī during the month of August was above the average and in September more than twice the normal amount of rain fell; the Tīsta was in consequence very full when a further volume of water was poured into it. The river began to rise rapidly at about 3-30 P.M. on September 27th and continued to rise steadily till 5-30 A.M. on the 28th when it reached a height of eighteen inches above the highest flood level of the preceding ten years; during these fourteen hours its rise was six feet. It remained at its maximum height for about half an hour and then began to fall as rapidly as it had risen; by 6-30 P.M. on the 28th it had fallen to the height of an ordinary flood. The following description of the state of things in the Jalpāigurī town was written by the Deputy Commissioner Mr. Forrest:—

'The sudden rise in the flood came as a surprise to everybody in Jalpāigurī. I was awakened at 3 A.M. on the morning of the 28th by the head constable of the treasury guard who told me that the flood had risen to the treasury steps and was threatening to carry away the treasury. I got up and proceeded to walk to the treasury. The water was over my knees in my compound and on the metalled road to the treasury it was rushing with great force about two feet deep. Large pieces of drift wood were being carried along over the road, and getting along at all was a matter of some difficulty. It took me almost half an hour wading to get

to the treasury' (a distance of about three hundred yards). 'When I arrived I saw that the water was within a couple of inches of the floor of the strong room, so I sent for the treasurer and the treasury officer who arrived after an interval of over an hour. In the meantime the flood had risen about six inches and had flooded the strong room. When the treasurer and treasury officer arrived, we opened the treasury and shifted stamp boxes and opium out of danger of the wet. No damage was done. About an hour after this, the flood showed signs of abating, so leaving the treasury officer in charge of the treasury, I waded back along the road till I came to the Karla bridge which was well above the flood level. I then walked to the post and telegraph office and ascertained that communication with Darjeeling was uninterrupted and thence to the railway station where I could get no information beyond the fact that the line was breached between Jalpāigurī and Haldibāri and that booking had been stopped.

'From subsequent enquiries it appeared that remarkably little damage was done within the Municipality; some people living in the lower parts of the town were flooded out for a time and a small amount of damage was done to the stocks of two or three big merchants—sugar, salt, dal and potatoes. Prices of provisions are very slightly higher owing to the breaches on the Eastern Bengal State Railway. Most offices and other public buildings have their floors covered with mud but no serious damage was done.'

Extent of the floods.

On the west of the Tīsta the river began to overtop its banks at Rangdhamali about 9 miles above Jalpāigurī and spread over the country as far as the river Karla; in this area the rise was gradual as the water had plenty of room to spread. Below Jalpāigurī the Eastern Bengal State Railway runs for a considerable distance parallel to the Tīsta and at no great distance from it. The railway embankment, which has in this section few bridges and culverts, checked the free spread of the flood of water, which made a wide breach in it and flowed away with considerable violence over the rice-fields until it reached the Ghoramārā river. Between this breach and the Mandalghāt railway station there were several other breaches, and a bridge was washed away.

On the east bank the condition of the country is somewhat similar; the river flooded the country below Gazalduba, but the water encountered no check until as far south as the Domohani station on the Bengal-Duārs Railway. From this point the railway embankment runs at a distance of not more than half a mile from the river, and the water, making a large breach 200 feet wide south of Domohani station, rushed down an old *khal* in the direction of Māinagurī. The flood water cut the railway again near the Bhotepati station and rejoined the Tīsta. The country between the railway line and the river was flooded for several miles south of Jalpāigurī.

Damage done by the floods.

Loss of life was not heavy and was confined to places where the rise of the water was rapid. Three herdsmen, who were grazing buffaloes on a large *chur*, were not able to reach the high bank in time and were drowned; at Barnes Ghāt three women and two children, members of a sweeper family living in a hut on the extreme edge of the river, were swept away and drowned. The total number of lives lost was only ten. Comparatively little damage was done to the crops; the winter rice benefited by the silt deposited by the flood; the standing jute was unharmed, but much of the jute which was being steeped was washed away and lost. The loss of cattle was serious, but it is difficult to form an accurate estimate of it: 200 dead cattle and 10 buffaloes were counted along the banks of the river and the Deputy Commissioner put the total loss at 350 head of cattle and 20 buffaloes. The villages on both sides of the river were full of stray cattle which had been carried down by the floods and it took a long time before they were all claimed and restored to their owners. There was a large herd of nearly 500 buffaloes on the Nathua Khal when it was submerged in the flood and no less than 79 of them were rescued at the Mandalghāt village 15 miles down stream; nearly all the buffaloes got ashore at one village or another.

The damage done to the railways has been already mentioned. The big breach on the Eastern Bengal State Railway took over ten days to repair and 3rd class passengers were sent round by Lālmanir Hāt and the Bengal-Duārs Railway. A bridge was carried away on the Jalpāiguri road and another on the Jalpāiguri-Alīpur road, but otherwise the roads received comparatively little damage.

Floods in 1906.

In 1902 the floods were confined to the basin of the Tīsta river, but in 1906 they were general over the whole district. Heavy and continuous rain fell in July during which month 40·05 inches were registered at Jalpāiguri and the fall was even more heavy in the part of the district near the hills. In previous years floods were caused by sudden downpours of rain lasting a comparatively short time; the feature of 1906 was the long succession of rainy and sunless days. On the night of August 3rd and morning of August 4th, all the rivers and streams in the district rose simultaneously and the damage done to railways and roads was enormous. Owing to the interruption of communications it was some time before the full extent of the mischief could be ascertained.

Jalpāiguri town.

At Jalpāiguri nearly 24 inches of rain fell between 8 A.M. on July 28th and 8 A.M. on August 4th. The river Tīsta which had been rising steadily began to rise very fast on the night of August 3rd and by 6 o'clock next morning much of the town was flooded. The water rushed through the compound of the Deputy Commissioner's bungalow, and across the road into the compound of the circuit house where it was over two feet deep; the cutcherries were

surrounded with water and at one time it looked as though some of the temporary buildings would fall; steps were taken to remove the records, but the river fell as fast as it had risen and it was not necessary to do this. West of the Karla river the place was flooded right up to the Club, and the houses were standing in water; the Superintendent of Police spent the morning in a boat rescuing the women and children in the police lines and taking them to his own house for safety. In the bazar considerable damage was done on both sides of the Karla river, which was fed by a *khal* running into it from the Tīsta, and several houses fell.

Damage done by the flood.

There was no loss of life and the number of cattle drowned was remarkably small considering how widespread the floods were. Some damage was done to the *bhadoi* rice crop; the continuous rain delayed the harvest, and in a few instances close to rivers, crops were destroyed by the rush of water. The principal damage was, however, to communications; every railway and every road of importance in the district were breached and traffic stopped. The rain continued for over a fortnight after the big flood, and seriously interrupted the work of restoring communications. During the first 20 days of August not one day passed without rain, the amount registered at Jalpāigurī in this period being 48·96 inches, and at Alīpur Duār 50·28 inches.

Railways. The Eastern Bengal State Railway.

There was a bad breach near Mandalghāt on the Eastern Bengal State Railway and part of a masonry bridge was carried away. No train got through on August 4th and no mails were delivered, as it was impossible to get them over the breach where the rush of water was so great that an elephant could not cross it. The engineers set to work promptly and by August 8th trains were running through on a diversion.

The Cooch Behār State Railway.

On the Cooch Behār State Railway there was a succession of breaches between Gitāldaha Junction and the river Torsā, including two large gaps where bridges had been washed away. A mile from Alīpur Duār a culvert was washed out and a hole, 22 feet deep scored by the water; it took more than six train loads of boulders to fill up this hole. It is a remarkable fact that the bridges, consisting of wooden piles and iron girders on the road running parallel to the railway, stood the flood, while the corresponding masonry structures on the railway were washed out, though the road bore the first rush of the water. The line was opened for all classes of traffic on August 19th with one transhipment at the largest breach, where a bridge was washed away.

The Bengal-Duārs Railway.

Some damage was done to the Bengal-Duārs Railway north of Domohani station, but the section of the line from Lālmanir Hāt to Māl Junction, including the small but important branch to Rāmshāi Hāt, was soon in working order. At Māl the line divides, one branch going west to Bāgrakot, and the other east to Madāri Hāt; these branches run parallel and close to the hills and across the water-line of the country; they bore the full brunt of

the floods and were literally smashed to pieces. West of Māl several bridges were washed away including the one over the Kumlai river and a series of breaches were made in the embankments, the widest of which was near the Chel river. The eastern branch suffered most severely; there was a large breach in the embankment between Māl and Chalsa stations, but the worst damage was done between Chalsa and Nāgrakātā. North of the railway line the Jaldhākā river divides into two streams, one of which is called the Hathinalla; these are spanned by two large bridges, each about 500 feet long, between which there is a high embankment, which was protected by a rocky islet covered with trees. The flood cut away the island and about 1,100 feet of the embankment; the Hathinalla bridge stood, but not a yard of embankment remained attached to it, and in the gap a swift stream flowed over a stony bed. All the protective works were swept away and not a vestige of them was to be seen after the floods had subsided. Farther east the Dāina river cut away 900 feet of embankment, and there were numerous smaller breaches including one rather large one near Madāri Hāt. It was not until November that this section of the line was open to traffic again.

Telegraph lines.

The telegraph lines from Jalpāigurī to Alīpur Duār, Rāmshāi Hāt and Māl were uninterrupted, but all the lines to other parts of the Duārs were broken down. No time was wasted by the Telegraph Department and communications were quickly restored.

Measures taken to restore communications.

The complete breakdown of railways and roads made the position in parts of the Duārs very serious. Nāgrakātā and all the gardens to the east of it became dependent on the Rāmshāi Hāt railway station for their supplies of rice and coal and for the means of getting their tea away; the traffic thrown on the Rāmshāi Hāt-Sulkapārā and Rāmshāi Hāt-Gāirkātā roads was in consequence very great and efforts were directed to make these roads passable for traffic and to keep them open. At the same time more boats had to be railed up from Barnes Junction and placed on the ferries over the Jaldhākā and Dāina rivers. The work was carried out as speedily as possible, but until traffic could get through, rice sold at Nāgrakātā at three seers to the rupee. It was evident after this experience that the eastern branch of the Bengal-Duārs Railway could not be depended on and that good communication by road was necessary between Rāmshāi Hāt and the tea-gardens between the Jaldhākā and Torsā rivers. A road has now been constructed through the Tondu forest which, it is hoped, will be unaffected by floods and which will ensure communication between Nāgrakātā and the railway if the eastern branch breaks down again. It is proposed to protect the town of Jalpāigurī by making an embankment along the Tista; this will prevent the river from overflowing its banks and should save the town from floods.

FAMINES.

Famines are unknown in the district, though until 1905 it was included among those liable to famine. The Bengal famine of 1866-67 hardly affected Jalpāigurī at all, though the demand for grain in less favoured parts of the Province caused a considerable increase in the exports of rice, with the result of raising local prices to about double the ordinary rates. In 1873-74 there was slight distress in those parts of the district which border on Dinājpur, Rangpur, and Purnea, but no relief measures were called for. As Jalpāigurī is bounded on the north throughout its entire length by the lofty range of the Himālayas, it is very improbable that either the local rainfall, or the supply of water brought down by the rivers and streams would be affected by even the severest drought which might occur elsewhere. In the improbable event of a famine the railways, roads, and navigable rivers in the district afford sufficient facilities for the importation of grain to prevent the danger of the isolation of any particular tract of country.

EARTHQUAKES.

In the 1897 earthquake much damage was done to roads by subsidence and by the opening of deep fissures, and many bridges and buildings were destroyed. It is not uncommon even now to come across earthquake cracks when shooting in the jungle.

CHAPTER VIII.

LAND REVENUE ADMINISTRATION.

The Jalpāigurī district consists of two widely different tracts of country, *viz.*, the *parganas* of Bāikanthpur, Bodā and Pātgrām, formerly included in the Rangpur district, and the Western Duārs, wrested from Bhutān in 1864, and, in giving an account of the land revenue administration, it is necessary to deal separately with them.

THE PERMANENTLY SETTLED PARGANAS.

The *parganas* of Bāikanthpur, Bodā and Pātgrām formed part of the Koch kingdom, but were conquered and annexed by the Mughals, who incorporated them in the frontier *Faujdari* of Fakirkundi or Rangpur; they were transferred to the East India Company with the cession of the *diwānī* in 1765. At first the Company followed the Muhammadan practice of farming out the land revenue to contractors, but discontinued this system after the exactions of a notorious farmer, Rājā Debi Singh of Dinājpur, had led to an open rebellion of the cultivators in 1783. The *parganas* were permanently settled in 1793 with the rest of Bengal and are now called the permanently settled or regulation part of the district in contradistinction to the Western Duārs. The *tauzi* roll shows that they are divided into 82 estates, 169 revenue-free estates, and 252 rent-free tenures, but, with the exception of a few small areas, they are included in two large *zamindāris; pargana* Bāikanthpur belongs to the Bāikanthpur Estate, now under the management of the Court of Wards, and *parganas* Boda and Pātgrām to the Chaklajāt Estates of the Mahārājā of Cooch Behār. Dr. Buchanan-Hamilton, writing in 1809, gave the following account of these *zamindāris*:—

Dr. Buchanan-Hamilton's account. Pātgrām.

'Pātgrām Estate, which comprises the police division of the same name, is the property of the Cooch Behār Rājā, and contains 62 *mauzas*, or collections of villages. More than half the estate is let to large farmers, some of whom hold under leases called *upanchaki*, which are granted for a certain specified farm, and not according to a particular area, so that their rent cannot be increased nor their lands measured. The *don*, or local land measure, is equal to 15,670 square feet, or 1·08 Calcutta *bighas*. There are 30 *jotdārs* who pay their rents directly into the office of the Rājā's collector; these are called *khārij jotdārs*. The others, who pay their rents to the village officers, are called *dihibandi*. The large farmers let out to under-tenants as much land as suffices to pay their rent, and cultivate the remainder through *prajās*, on the usual sharing tenure. The average rent paid by the *jotdārs* to the Rājā is, I am told, only Rs. 3 for 10 *dons*, equal to 4½ annas a Calcutta *bigha*, but I believe

the tenants have to pay the whole of the village establishment. The people are very poor, shy, and indolent.

'Bodā is a very fine estate, also belonging to the Cooch Behār Rājā. It contains 402 *mauzas* or *dihis* besides 27 large *khārij* farms, such as I have mentioned in Pātgrām. No *lakhirāj* land is mentioned in the Collector's papers; but it is said a very large part has been granted rent-free by the Rājā, both to religious persons and to his own servants. Most of the farms were originally large, but they have in general been reduced to a small size, by subdividing among heirs, a most ruinous practice, which should be entirely prohibited. The whole estate is divided into *taluks*, and these again into *mahāls*, each of which was originally one farm. In every *taluk* are from two to five *tahutdārs*, who are wealthy farmers appointed by the Rājā according to the wishes of the other tenants, and are usually continued in office for several years. The *tahutdār* finds security for the whole rent, and receives from the tenants from Rs. 50 to Rs. 175 a year, according to the extent under his charge; the tenants pay the whole village establishment of clerks (*patwāris*), and various kinds of messengers (*sardārs, pāiks, kotwāls*, etc.). The lands were not measured when the settlement of the Rājā's estates was made, the tenants being very averse to such a course, as might naturally be expected, for the rent which they pay is very small. The leases specify neither the term of years for which the holding is let, nor the measurement of the farm, but only the rent stipulated to be paid for the farm. If any tenant goes away, the others pay the rent until they can procure a new tenant, or else they divide the land among themselves. The Rājā has, therefore, no interest, except to collect the rent with as little expense as possible, and to beg and squeeze all that he can from the tenants. There is no economy in the management. In some *taluks* no *tahutdār* can be found, and these are managed by *gomāstās*, or agents, each with a large establishment. The *tahutdārs*, who are men of property, and who ought to pay their whole rent into the Rājā's office, make delays, so that six *tahsīldārs* or stewards are required to refresh their memories. The twenty-seven original large farms, which are not dependent on the *tahutdārs*, but which, if undivided, would have paid their rents immediately into the Rājā's office, have now subdivided into so many small shares, that a whole host of subordinates is required to manage them. In fact, the Rājā's interests in this estate seem to have been very much neglected. Bodā.

'Bāikanthpur or Battris-Hazāri, although part has been alienated to Bhutān, is still a very fine estate, and comprises the two entire police divisions of Fakirganj* and Sanyāsikātā.† It is not included in any *sarkār* or Muhammadan division of the country, having only been added to Bengal since the British assumed the government of the country. A person named Sisu, Baikanthpur.

* Now Jalpāiguri. † Now Rājganj.

grandson in the female line of the Koch Hājo (the founder of the Cooch Behār Rājās), is the original ancestor of the Bāikanthpur family. It is generally asserted that Sisu was the son of Jirā, the daughter of Hājo, but the family themselves allege that he as well as Visu (another grandson of Hājo and the first of the Cooch Behār Rājās who was converted to Hinduism) was the son not of Jirā, but of her sister Hirā, and that his father was the god Siva, on which account all the members of the family assume the name of Deo, and return no salute that is made to them by any person. Sisu, on the conversion of Visu to Hinduism, took the title of Sib-Kumar, or young Siva; he was appointed hereditary Rāikat, or the second person in rank in the Koch kingdom, and received the Bāikanthpur estate as an appanage.

'Formerly the family resided at Bāikanthpur, where there was a little cultivation scattered among the woods; while all the southern part of the estate was allowed to be thickly overgrown with reeds and bushes, as a defence against the Muhammadans. Dharmā Deo, on the decay of the Mughal power, left Bāikanthpur and settled at Jalpāigurī. He began to clear the lands in the south, which are now well cultivated; but the tracts in the woods and jungles to the north, which were formerly cultivated, are now neglected. There are no large tenants on the estate, and the rents are still very low owing probably to the vicinity of Bhutān and Gurkhā' (Sikkim, then held by the Nepālis), 'where there is much waste land; and a large proportion of the tenants are constantly removing from one jurisdiction into another. The actual rent realised from the tenants is, I understand, about $4\frac{3}{4}$ annas per *don* of land, good and bad, containing 12,472 square feet, or about 0·86 of a Calcutta *bigha*. The maximum rent for a farm, 20 *don* in extent, is said to be as follows:—House and garden land, Rs. 15; first quality land, Rs. 12; second quality land, Rs. 9; third quality land, Rs. 7; fourth quality land, Rs. 4; total Rs. 47. Originally the farms were let by guess measurement, or by *kāldari* or "ploughs." That is, a farm was estimated to contain as much as could be cultivated by a certain number of ploughs, and paid a fixed sum for each, a custom which once probably extended all over Kāmrūp. About the year 1788, land measure was first introduced. The whole estate is divided into fifteen *taluks*, and the establishment is a very moderate one. In Sanyāsikātā, which is the largest *taluk*, there is one *tahsīldār* (steward), one clerk (*muharrir*), three inspectors of villages (*pradhāns*), one valuer of money (*poddār*), one chief messenger (*sardār*), one assistant messenger (*mirdhā*), four ordinary messengers (*pāiks*), one officer (*jamādār*), and four matchlockmen (*barkandāz*) and four sweepers. There is no subordinate village establishment. The whole are paid by money wages.'

Management of the Zamindāri Estates.

In the permanently settled *parganas* all the available land has been brought under cultivation; the only large uncultivated

area is the Bāikanthpur forest. The Cooch Behār *zamindāris* are well managed; the Manager has his head-quarters at Debiganj, and supervises all the estates, which are divided into *tahsīls* for collection purposes. The registers and accounts are kept up carefully, so that the position of any tenant can be easily ascertained. In order to ensure that transfers of holdings are recorded in the *zamindāri* offices, no fees are charged from the tenants for mutation of names. The Bāikanthpur Estate is under the Court of Wards; the Rāikat was born on the 9th October 1893, and is at present being educated at Darjeeling. The estate has been badly managed in the past and the interests of the proprietor have suffered; the rent-roll has not been kept up to date and no mutations of names have been recorded for at least 50 years, so that it is a difficult matter to find out who is the possessor of any particular tenancy.

A record of rights is now being prepared under Chapter X of the Bengal Tenancy Act. In the course of these proceedings, the area of each tenancy, the facts of its possession and the status of the tenant will be determined. Where the present rent is found to be liable to periodic revision, a fair and equitable rent will be settled.

The tenants.

The tenants in both *zamindāris* are prosperous; their rents are low, and they are not harassed by illegal exactions. Unfortunately some of the land has passed into the hands of middlemen, *e.g.*, Mārwāris, pleaders and others who are not cultivators, these men hold as *jotdārs* under the *zamindār*, but are mere rent receivers.

Jotdārs.

The tenants in these estates are divided into tenants-in-chief (*jotdārs*), sub-tenants (*chukānidārs*, *dar-chukānidārs* and *dar-a-dar chukānidārs*) and holders under the *Metayer* system (*adhiārs*). The *jotdārs* are tenants holding immediately under the *zamindārs*; a large number of them rank as tenure-holders and others as *raiyats* under the provisions of the Bengal Tenancy Act. The *jots* vary greatly in size. When the *jotdār* is not a middleman, he is usually a substantial farmer, possessing a considerable amount of capital and generally well-to-do.

Chukānidārs.

The *chukānidārs* are tenants holding land on a money rent immediately under the *jotdārs*. They have a right of occupancy and can transfer their lands by sale or gift. Most of them are well-to-do and some have *jots* or shares in *jots* in addition to their *chukāni* holdings. The *dar-chukānidārs* hold their land in the same way under the *chukānidārs* and the *dar-a-dar chukānidārs* under the *dar-chukānidārs*. Most of these inferior tenants have acquired a right of occupancy under the provisions of the Bengal Tenancy Act. It is difficult to say how far the process of sub-leasing extends, but there are probably not very

many *dar-chukānidārs* or *dar-a-dar chukānidārs*. Figures are being collected which will show the true state of affairs.

Adhiārs.

Adhiārs or *prajās* are, as mentioned above, holders on the *Metayer* system. They cultivate land immediately under a *jotdār*, *chukānidār* or derivative *chukānidār*, but whatever the designation or status of the *adhiār's* immediate superior may be, he is known as the *adhiār's* "*giri.*" Half the produce of the land goes to the *giri* and half to the *adhiār*. The *giri* usually makes an advance of seed or cash to the *adhiār* which is adjusted when the produce is divided. The ploughs and cattle sometimes belong to the *giri* and sometimes to the *adhiār*; not infrequently the *giri* owns parts of the agricultural stock and the *adhiār* owns the remainder. The legal status of the various classes of *adhiār* is somewhat uncertain, but the Board of Revenue, Eastern Bengal and Assam, has recently passed orders that *adhiārs*, who are independent of their *giris* in the matter of ploughs and cattle, are to be treated as tenants, irrespective of the length of time during which they have occupied the lands which they cultivate.

THE WESTERN DUARS.

The Western Duārs includes the tea-gardens, which are divided into 180 grants or temporarily settled estates, and occupy an area of 368 square miles, and the reserved forests, which cover an area of 509 square miles. The rest of this portion of the district is divided into four *tahsīls*, each of which ranks as an estate in the *tauzi* roll. To these may be added the small *tahsīl* of Ambāri Fālākātā which, though not falling within the boundaries of the Western Duārs, was acquired at the same time and is settled in the same manner, so that in all there are 180 temporarily settled estates, and 5 Government estates in the Jalpāiguri district.

Temporarily settled estates.

The rules under which lands are leased for tea cultivation have been altered on several occasions, but have always been similar to those in force in the Darjeeling district. The old rules have been replaced by the Waste Land Rules which were issued by the Government of Bengal in 1896 and are still in force. Under these rules the applicant must satisfy the Deputy Commissioner and Superior Revenue authorities that he has sufficient capital at his command to enable him to open out the grant; he must deposit the cost of surveying the land calculated at the rate of one rupee an acre of the estimated area and is also required to execute an agreement to pay at a similar rate for any land in excess of that originally estimated. When this has been done the Deputy Commissioner directs a detailed enquiry to be made in order to ascertain whether the land can be leased; if he decides to lease it, he directs a survey to be made and, at the same time, a valuation of the timber is made by the Forest Department. The applicant is called on to pay any sum due on account of the cost of survey and also the value of the timber. When he has

done so, he receives a preliminary lease for a term of five years, the land being rent-free for the first year and after that paying a rental of 3 annas an acre for the second year and an additional 3 annas for each successive year up to 12 annas an acre. Each grant must be compact and capable of being enclosed in a ring-fence; it must ordinarily not contain more than 1,500 acres, but larger grants may be made for special reasons. The rights conveyed by the preliminary lease are heritable and transferable subject to certain conditions, *viz.*, that the entire grant and not a portion of it is transferred by registered deed; that the conditions relating to the clearance of the land are duly observed; that a transfer fee is paid; that the Deputy Commissioner is satisfied that the transferee has sufficient capital to enable him to cultivate the grant; and that the transfer is registered in the Deputy Commissioner's office within one month. Government reserves all rights to minerals and quarries, and the right of the public to fisheries and a right of way along either bank of every navigable stream are also reserved. The lessee is bound to allow public access to springs of water on his grant, when it is necessary for the convenient supply of good water to persons living in the vicinity. Provision is made for the residence of the lessee or of a duly appointed manager on or near the grant, for the erection and maintenance of proper boundary marks, and for the supply of information as to births and deaths of residents on the estate and as to the progress and outturn of cultivation. Any land covered by the lease, which may be required for a public purpose, may be taken up by Government free of cost on a proportionate reduction being made in the rent and on payment of the value of any improvements on the land acquired. Lessees can, with the permission of the Deputy Commissioner, club or amalgamate their grants, but no isolated grant can be amalgamated with other grants lying more than two miles away from it. Any unauthorised amalgamation subjects the lessees to forfeiture of all rights in the lands so amalgamated. If it is found by inspection that during the currency of the lease, not less than 15 per cent of the total area of the grant has been brought under cultivation by means of good husbandry, and actually bears tea plants, the lessee is entitled to the renewal of the lease for a further period of 30 years, and to renewals for similar periods in perpetuity, but Government reserves the right to fix the rent, provided that it shall not be less than 12 annas an acre on the entire area of the land leased, nor exceed the rate of rent per acre, paid in the neighbourhood at the time of renewal, for the highest class of land under ordinary cultivation. The highest rates of rent are payable by tea-gardens in the Māinagurī *tahsīl*; land under tea is assessed at Rs. 2 an acre, homestead and bamboos at Rs. 3 an acre and waste land at 6 annas an acre. The rates diminish as one proceeds east, and are lowest in the Bhālka

tahsīl. The renewed lease conveys a heritable and transferable right in whole or in part, provided that due sanction is obtained and the transfer properly registered; all the other conditions of the preliminary lease hold good. The lessee is liable to forfeit his lease if he fails to comply with any of its provisions. If he fails to comply with the clearance conditions he may be allowed to hold on from year to year as a tenant-at-will for a term not exceeding three years, and if, during this period of grace, he succeeds in bringing at least 15 per cent of his grant under tea cultivation, he may be given a renewed lease. Government reserves to itself the right to exclude any particular area from the operation of the rules and to sell grants in that area by auction. Reserved forests, lands having valuable timber in considerable quantities and in compact blocks, lands in respect of which any person, or village community, possesses rights which render it unadvisable to grant them for the purpose of tea cultivation, lands lying within a distance of 60 feet from the centre of any public road, and lands expressly exempted by Government are not to be leased.

Government estates.

The Government estates in the Jalpāiguri district include all the Western Duārs outside the tea-gardens and reserved forests and the *tahsīl* of Ambāri Fālākātā situated on the west of the Tīsta river. Ambāri Fālākātā was divided into 56 *jots* at the last settlement and what waste land is left is not worth cultivating; it resembles in every respect the Bāikanthpur pargana by which it is surrounded. The *jotdārs* pay their rents into the Jalpāiguri treasury, and the estate is managed by one of the Deputy Collectors, who visits it from time to time. The four *tahsīls* of the Western Duārs are Māinagurī, Fālākātā, Alīpur, and Bhālka. Nearly all the available land in the Māinagurī *tahsīl* has been leased out and there is keen competition for any land fit for cultivation; numbers of applications were received for plots of land in a small area which was disforested and thrown open to settlement and the waste lands included in the *jots* are being speedily brought under cultivation. Fālākātā is not far behind Māinagurī and, if the present rate of progress continues, will soon be as well cultivated and possess as large a population. There is still a good deal of waste land in Alīpur and Bhālka, but even in these *tahsīls* cultivation is extending rapidly. So much is this the case that it has been found necessary to reserve land near Alīpur Duār to provide fodder for the Government elephants, as there is every prospect of the jungle in the neighbourhood disappearing in a few years' time.

Tenancies.

The tenancies in the Western Duārs are very similar to those in the permanently settled portion of the district. The year after the annexation of the Duārs an enquiry into the position of the *jotdārs* was made by Mr. Tweedie, then Deputy Commissioner. He found that they represented the original reclaimers of the soil, that their rights were hereditary and in fact

passed through many generations, that they could sell the land, and were in the habit of temporarily alienating it by usufructuary mortgage. Their holdings were not liable to sale or forfeiture for arrears of revenue and were lost to them only by voluntary alienation or by desertion. On the other hand, they were liable to pay such revenue as might be fixed and also occasional benevolences. Under the Bhutiās, however, all rights were constantly violated, particularly during the period immediately before the annexation of the Duārs. *Jotdārs* occupying the same position are found throughout the Rājshāhi division, predominating in the north, where a large proportion of the land has been recently brought under cultivation, and giving way gradually to the ordinary type of occupancy *raiyat* towards the south. Mr. Nolan, Commissioner of the Rājshāhi division, in a note which he wrote on Mr. Sunder's settlement of the Western Duārs, recorded the following remarks:—'Beneath the *jotdār*, Mr. Tweedie found three classes—*chukānidārs*, "who hold for a fixed term, being more than one year," *raiyats*, described as tenants by the year at a money rent, and *prajās*, or tenants-at-will, receiving from the *jotdār* the instruments of cultivation and giving to him half the produce. It is a common mistake into which one revenue officer falls after another, to assume that these four classes are always found one above the other on the same land, the last being the actual cultivator, and the other three living on his labours. Most *jotdārs* plough their fields with their own hands, and those who employ "*prajās*" use them only as a small farmer does the labourers he hires. The "*raiyats*" of Mr. Tweedie's report are not said to hold under the *chukānidārs*, from whom they are distinguished only by the length of the term for which they engage—a matter of no importance, when written contracts were unknown. These two classes are now amalgamated under the name of *chukānidārs*, and have been greatly raised in the agricultural scale. It thus appears that under the Bhutiās, there were really only two sorts of cultivators—the *jotdārs*, found everywhere in a privileged position directly under Government, and in some places the *chukānidārs*, tenants of the *jotdārs* for a term, or year by year: there were also farm labourers, a landless class, working for hire on a peculiar system. The only change since effected is that the position of the *chukānidārs* has been raised.' Since Mr. Tweedie's time the most important changes which have been made are that *jots* are liable to sale, if the rent due is not paid, and to forfeiture if the *jotdār* fails to comply with the conditions of his lease; the position of the *chukānidārs* has been raised and they now have occupancy rights while their rents cannot be enhanced during the period of settlement. There are very few *dar-chukānidārs* and these are not recognised by Government. In order to prevent sub-infeudation the leases at present in force contain clauses forbidding the creation of any tenure subordinate to the *chukānidār*.

SETTLEMENTS. The first settlement.

For six years after the cession of the Western Duārs by the Bhutiās, the policy followed was to collect all recognised dues without altering the amount. The first settlement took effect from April 1871 and was made after a detailed measurement and classification of all cultivated land ; the *jotdārs* were permitted to include in their holdings as much waste land as they chose, and in fact appropriated 142,127 acres of waste against 80,395 acres of cultivation. The rents of *chukānidārs* were not recorded nor was any attempt made to fix them for the term of settlement, an omission of which Government subsequently expressed disapproval. The settlement was made for a term of seven years, but was allowed to stand for two years more. Meanwhile the *pargana* of South Māinaguri, which had been leased to the Rāikat of Bāikanthpur, reverted to Government and had to be dealt with. At this settlement it was finally decided that the *jotdār* has a vested transferable interest in the land. The rents were considerably increased, the rate for waste being doubled, with the result that the revenue of the *pargana* rose from Rs. 42,706 to Rs. 65,133. The rights of the *chukānidārs* were again not recorded.

The second settlement.

The second settlement took effect from April 1st, 1880, and was based on the rates in force in South Māinaguri, which had worked successfully for some years. On this occasion the rents payable by *chukānidārs* were fixed for the term of settlement, provided that, where they did not exceed the revenue by 50 per cent, they could be "raised to that amount by the Settlement Officer if, after detailed enquiry, he found such a proceeding fair." In practice the courts decreed the specified maximum whenever the *jotdārs* sought for enhancement. The general result of the settlement was to raise the revenue from Rs. 88,618 to Rs. 1,51,862, but though the rates imposed were not excessive, they were found to press too severely on the inferior *jots*, and remissions amounting to Rs. 17,806 had to be granted in addition to Rs. 5,465 lost by relinquishments and desertions.

The third settlement.

The third settlement, known as Mr. Sunder's settlement, was made in 1889—95 and was for a period of fifteen years in the four *tahsīls* of the Western Duārs, and for ten years in Ambāri Fālākāta; but subsequent alterations were made in order that the term of settlement should expire in all cases on March 31st, 1908. The *jotdārs* had agreed to an increase of three annas in the rupee rental, and it was at first assumed that this was equivalent to the same increase in the rates. It was found, however, that there had been an increase in cultivation more than sufficient to give the additional three annas without any alteration in the rates and irrespective of the gain derived from assessing new *jots*. The actual increase of revenue at this settlement was 60 per cent, of which 12 per cent was on account of the increase in the area under cultivation and 48 per cent was due to the enhancement of the rates. The rents of the *chukānidārs* were fixed for the term of the settle-

ment on the principle that they should ordinarily be 50 per cent above the *jotdāri* rates. It was recognised that a *chukānidār* has a heritable and transferable right to his holding subject to the payment of his rent. Mr. Sunder writes in his settlement report "a *chukānidār* cannot be ousted from his holding, except by order of a competent court, notwithstanding the fact that he may not have been twelve years on a *jot*. There is an unwritten law between him and his *jotdār* that he cannot be ousted from his lands so long as he pays his rent. Some *jotdārs* endeavour to get over this by giving a *chukānidār* a lease on plain paper, but they never succeed against the *chukānidār*." At the time of the first settlement no *dar-chukānidārs* could be found, but during this settlement, it was discovered that there were 3,739 such under-tenants holding 18.253 acres of land. Government refused to recognise this newly created under-tenure and the *dār-chukānidārs* were informed that they had no rights whatever.

The fourth settlement. The fourth settlement of the Western Duārs was begun in the cold weather of 1907 and is now in progress. There has been a very marked increase in the area under cultivation and much waste land has been reclaimed since the last settlement. Even if the existing rates were maintained there would be a considerable increase in the revenue, but they are so low that they can be enhanced without hardship to the *jotdārs*.

Leases in force in the Government estates. There are three forms of lease in force in the Government estates at the present time. In the case of *māl jots*, *i.e.*, *jots* which were in existence at the time of the second settlement, the lease gives the *jotdār* a heritable right and permits him to transfer the whole or any share in his *jot*; it contains no provision requiring residence and has facilitated the creation of a middleman and absentee class of tenant. When waste land is settled, a preliminary lease for a term of five years is granted. The *jotdār* is bound to reside on or near his jot and to bring half the area of it under cultivation within the term of the lease; he can transfer his entire holding but not a portion of it unless the Deputy Commissioner, with the sanction of the Commissioner, permits him to transfer a portion. If he complies with the conditions of his lease, he is entitled to a renewed lease for a term coinciding with the period of the current settlement and thereafter to renewals for the period of each fresh settlement, subject to the right of Government to fix the rent on each occasion. All the leases contain clauses similar to those in the leases of land for tea cultivation, reserving the right of Government to minerals and quarries, and to take up any land required for a public purpose free of cost, subject only to a proportionate reduction in the rent and to payment of the value of any improvements on the land acquired, binding the lessee to keep up boundary marks, etc.

SPECIAL SETTLEMENT.

Hedāyat Ali's estate. Shortly after the acquisition of the Western Duārs, Colonel (then Major) Hedāyat Ali, who acted as a Political Officer during the Bhutān war, obtained in February 1866 a rent-free lease for

five years permitting him to bring under cultivation all the unoccupied lands in twenty *taluks*, with a promise that all lands so brought under cultivation would be settled with him at the end of the period. This lease was subsequently cancelled, as were also several other leases, but in May 1868 Colonel Hedāyat Ali was given a lease under which he got exclusive possession of the whole of the unoccupied or waste lands in ten *taluks*, exclusive of the lands in the possession of Government *raiyats*. The arrangements made with Colonel Hedāyet Ali were modified in 1871 and again in 1876. In 1883 settlement of 46,754 acres of land including waste in *parganas* West Madāri, Moraghāt and Lakhipur of the Fālākātā *tahsīl* was made with his heirs on the following conditions:—"that all the cleared and cultivated lands shall now be settled with the heirs of the grantee at half rates for 30 years, and that the uncleared and waste shall remain with them for seven years longer free of revenue. Should half the land now uncleared and waste have been brought under cultivation within that period, the entire tract now waste, granted revenue-free for seven years, shall be included in the lease of the cultivated tract now sanctioned for 30 years at half Duārs rates. But should the condition of half clearance not be fulfilled at the expiry of seven years, the uncleared portion shall be forfeited, and the rest shall be included in the estate to be held on half rates from the period of settlement now sanctioned." The lessees failed to fulfil the conditions as to reclamation and, at Mr. Sunder's settlement, 19,191 acres of waste land were resumed, the remaining 22,563 acres being settled with them at half rates. The present revenue of the estate is Rs. 7,897. There are now several shareholders and the estate is not well managed; the tenants are greatly harassed by the various managers and *tahsīldārs* who are employed by the different shareholders.

Lands settled with Rai Upendra Nath Duārdār.

As a reward for his services in the Bhutān war, Rai Upendra Nath Duārdār was granted 2,000 acres of arable land rent-free in perpetuity, and certain other lands, rent-free for life, in the Alipur *tahsīl*. The land which was granted rent-free in perpetuity was sold by the Duārdār for Rs. 20,000. After his death the land which had been granted to him rent-free for life was settled with his family at one-fourth rates for a period of 15 years. The rent payable for this land is Rs. 477.

The Jalpes temple lands.

The rents of 44 *jots* in *pargana* South Māinagurī are devoted to the up-keep of the Jalpes temple. These *jots* were unassessed up to the time of Mr. Sunder's settlement when they were resumed and assessed to revenue. Government has since given up its claim and the tenants pay their rents, amounting to Rs. 2,465 to the Jalpes Temple Committee which uses the money for the purposes of the temple.

The Mech and Gāro colony.

Some account has been given in a previous chapter of the Santhāl colony. An attempt has been made to found a somewhat

similar colony for persons of the aboriginal races, who were being exploited by their more intelligent neighbours and were in danger of losing their lands. The Mech and Gāro colony is situated in the Alīpur *tahsīl*, east of the Torsā river and south of the road leading to Rājābhātkhoā. No special measures were, however, taken to ensure that the tract of country, containing an area of 30 square miles, should be kept only for Meches and Gāros for whom it was reserved; the ordinary leases were issued and there was nothing to prevent the *jotdārs* from transferring their holdings. A special enquiry was made in 1907-08 with a view to discover the actual state of affairs and it was then found that there was not a single Gāro in the colony and that more than half of the *jotdārs* were outsiders, mainly Orāons. There were in fact 218 Mech *jotdārs*, 117 *chukānidārs* and 219 *adhiārs* while 373 *jotdārs*, 88 *chukānidārs* and 254 *adhiārs* belonged to other races. It is proposed to prevent the Meches, who remain in the colony from transferring their *jots* to outsiders, from sub-leasing to *chukānidārs* and from employing *adhiārs* who are not Meches, and to make new settlements, only with Meches. If this is done the land, of which the Meches still retain possession and the waste land which has not yet been settled, can be kept for the people for whom the colony was founded.

CHAPTER IX.

RENTS, WAGES AND PRICES.

RENTS. Permanently settled estates. The Chaklajāt estates.

The rents paid by the tenants vary in different parts of the district, but are not high either in the *zamindāris*, or in the Government estates. In the Chaklajāt estates there is no uniform schedule of rates in *pargana* Bodā; the rates of rent vary in different *girds* (a local division of a *pargana*), *taluks*, and sometimes even in different *jots*. No fixed scale was adopted in making the *jamabandi* of this *pargana* but the various blocks of land were dealt with independently and according to no settled plan. In the Pātgrām *pargana* the following scale was adopted:—*jotdārs'* homestead lands Re. 1-15-6 a bigha*; under-tenants' homestead lands Re. 1-7-8; garden lands Re. 1-7-8; betelnut, Rs. 3-14-11; bamboo clumps 7 annas and 11 pies; all cultivated lands, lands growing thatching grass and waste lands 4 annas and 9 pies a *bigha*. The rates, which have been accepted during the last few years in making new settlements, are:—*jotdārs'* and under-tenants' homestead lands Rs 2-8 a *bigha*; betelnut Rs. 4; garden lands and lands growing bamboos, sugarcane or tobacco Rs. 2; jute lands, *dofasli* Rs. 3 and *ekfasli* Re. 1-12; other cultivated lands, 1st class Re. 1-4, 2nd class Re. 1, 3rd class 10 annas, 4th class 4 annas; lands growing thatching grass 12 annas; and waste lands 3 annas a *bigha*. These rates are much higher than those in force in the Government estates, where the highest rate charged for homestead, bamboos or betelnut is Rs. 3 an acre, and for cultivated lands Rs. 2 an acre. The Manager states that the incidence of rent over the whole area of *parganas* Bodā and Pātgrām is a little more than 5 annas a *bigha*. Practically all the available land in these two *parganas* is under cultivation.

The Bāikanthpur estate.

No survey and settlement of the Bāikanthpur estate has been made for many years and the rent-roll has not been kept up to date. In a number of cases leases have been granted without measurement for indefinite areas of land, so that many of the tenants have considerably enlarged their original holdings, and still pay only the lump sum agreed upon at the time of settlement. The Manager of the estate, which is under the Court of Wards, states that the following rates of rent are prevalent:—homestead lands Rs. 3 an acre; cultivated lands, 1st class Rs. 2-4, 2nd class Re. 1-12, 3rd class Re. 1-8 and 4th class 12 annas an acre. These rates are not dissimilar to those in force in the Māinagurī *tahsīl*, but it is doubtful whether they bear much relation to the rents

* The Bengal *bigha*, equal to about one-third of an acre.

actually paid. In the Chaklajāt estates there is no fixed rate of rent payable by *chukānidārs* to *jotdārs*; the parties make whatever arrangements they think fit In the Bāikanthpur estate the Manager estimates the average rates of rent paid by *chukānidārs* at from Rs. 3 to Rs. 9 an acre, and, near the forest, at from Rs. 2 to Rs. 6 an acre; the rates of rent vary considerably and there is no fixed standard.

It has always been assumed in the Duārs that every field under cultivation has been reclaimed at the tenant's expense from the original jungle and, after the Bhutān war, it was found that the tenants held at a mere jungle rent. This was allowed to continue without change for six years, when the first settlement of the Western Duārs was made, and since then the rents have been gradually enhanced at successive settlements as the country has been reclaimed and land has increased in value. Under the Bhutiās land was left rent-free for five years after the forest had been cleared, and was then assessed at area rates according to the *hāl* or plough, a local measure of about 5 acres. In the Sidli Duār, in the Goālpārā district (there are no records showing the area rates in the other Duārs) the charge was Re. 1-14 a *hāl*, or 6 annas an acre, for land growing winter rice, all other classes of soil being granted to residents free of rent. Strangers paid Rs. 2-8 a *hāl*, or 8 annas an acre, for land of every kind. In addition there was a special cess on mustard seed and a local rate of Re. 1 a *hāl* and Rs. 2 a house was levied for religious festivals. Persons who squatted in the jungle paid a *dao*, or knife, tax, and there were also a tax on looms, a fee for irrigation channels, and licenses to trade and ply boats. The Government estates.

Lands in the Western Duārs are divided into two main classes, *viz.*—*rupit*, which is low land suitable for growing winter rice, and *faringati*, or high land, on which jute, tobacco and *rabi* crops are grown. At the first two settlements no attempt was made to discriminate between different classes of soil but uniform rates for *rupit* and *faringati* were adopted for large areas; the highest rates were assessed in *parganas* Ambāri Fālākātā, North Māinagurī, South Māinagurī, Chengmāri and Moraghāt; intermediate rates in Lakhipur and West Madāri; and the lowest rates in all the remaining *parganas*. At the settlement of 1892, it was decided to classify, not the fields but the *jots*, in three orders and this was done by *taluks* according as the neighbourhood was in a flourishing condition or otherwise. Rates were then worked out for the three most advanced *parganas*, North Māinagurī, South Māinagurī, and Chengmāri, so as to provide for an enhancement of three annas in the rupee, on the supposition that there had been no extension of cultivation within the *jots* which were settled at the last general settlement, though, as a matter of fact, there had been a very large extension of cultivation within the old *jots*. The difference in the rates now in force and those fixed at the settlement of 1880

are shown in the table in the margin.

Description of land.	Rates at settlement of 1880.	Rates at settlement of 1892.
	Rs. a.	Rs. a.
Homestead, Bamboo ..., Garden ...	2 0	3 0
Rupit ...	1 8	1st class 2 0 2nd " 1 12 3rd " 1 9 4th " 1 8
Faringati ...	1 2	1st " 1 8 2nd " 1 6 3rd " 1 3 4th " 1 2
Waste ...	0 3	0 3

The rate for extraordinarily good land, which was meant to be exceptional, was used freely, while that for very bad land was not used at all; one-sixth of the whole area was assessed at the highest rate, one-half at the second, and the remaining one-third at the third rate. In the remaining nine *parganas* all *rupit* and *faringati* lands were placed in a single class and there was no subdivision under the main classes. The settlement of these *parganas*, which were in a comparatively backward state, was made on the basis of the rents paid by the *chukānidārs*, the revenue in every case being two-thirds of the rent. Where the *jotdār* cultivated himself, rates were fixed so as to correspond with the rental paid for similar lands by *chukānidārs* deducting the *jotdārs'* allowance. In most of the *parganas* the rates calculated in this manner were found to be generally the same as those sanctioned at the settlement of 1880. In Moraghāt the rate for *rupit* was raised from Re. 1-8 to Re. 1-12, and that for *faringati* from Re. 1-2 to Re. 1-4, and in West Madāri the *rupit* rate was raised from Re. 1-4 to Re. 1-8. The rates per acre paid at present in the Government estates are shown below:—

Name of Tahsil.	Rupit.	Faringati.	Homestead.	Dobas.	Waste.
	Rs. a.	Rs. a.	Rs a.	Rs. a.	Rs. a.
Māinaguri ...	1 8 1 9 1 12 2 0	1 2 1 3 1 6 1 8	3 0	1 9 1 12	0 3
			Pargana Moraghāt.		
Fālākātā ...	1 12	1 4	2 0	2 0	0 3
			Pargana Lakhipur.		
	1 4 1 8*	0 12	1 12	1 4 1 12*	0 3
			Pargana West Madāri.		
	1 8	0 12	1 12	1 12	0 3
Alipur ...	1 2	0 9	1 8	1 2	0 3
Bhālka ...	1 2	0 9	1 8	1 2	0 3
Ambāri Fālākātā	1 8	1 2	2 0	1 8	0 3

* Apply to taluks Bālāsundar and Bhutnirghāt only.

At the settlement of 1892, 384,896 acres of land were settled with the *jotdārs*, or tenants holding immediately under Government, and this was assessed to pay a revenue of Rs. 3,74,901. The average incidence of revenue to the acre on the whole area is 15 annas and 9 pies or, if calculated on the homestead and cultivated lands only, Re. 1-10. *Chukānidārs* or sub-tenants under the *jotdārs* held 128,288 acres and the rent fixed as payable by them was Rs. 1,69,473; the average incidence of rent to the acre paid by the *chukānidārs* is Re. 1-5 or, if calculated on homestead and cultivated lands only, Re. 1-14. In order to prevent sub-infeudation *chukānidārs* are not permitted to sub-lease their lands. Below the *jotdārs* and the *chukānidārs* are the *adhiārs*; these men receive half the produce of the land which they cultivate.

The rates of rent for tea lands vary in accordance with the rates paid for the highest class of land under ordinary cultivation. In all cases in which a lease has been renewed since April 1st, 1892, the highest rate shown in the statement given above has been charged for each class of land.

The Rent Law.

In that part of the district of Jalpāigurī, which was formerly a portion of Rangpur, Act X of 1859 with its amending Acts was the rent law up to the 5th November 1898, but, in the Western Duārs, Act XVI of 1869, the Bhutān Duārs Act, was in force up to the 16th October 1895. This Act excluded the ordinary civil courts from the cognisance of suits relating to immovable property, revenue and rent. In the schedule to this Act there were certain rules for the assessment of the Bhutān Duārs with Government revenue and for the preparation of the record of rights to form the basis of such assessment, but no rules were laid down for the guidance of the officers, engaged in the administration of this tract of country, in suits relating to immovable property or rent. There was, therefore, while this Act was in force, no definite rent law for the Western Duārs. Act XVI of 1869 was, however, repealed by Act VII B. C. of 1895 and on the 25th October 1895 Act X of 1859 was extended to the Western Duārs. Subsequently on the 5th November 1898 two notifications were issued extending the Bengal Tenancy Act, VIII of 1885, to the permanently settled portion of the district and partially extending it to the Western Duārs. The extension of the Act to the Western Duārs is subject to the following restrictions:—that none of its provisions, except the section which repeals previous rent enactments, shall apply to any lands heretofore or hereafter granted or leased by Government to any person or company under an instrument in writing for the cultivation of tea or for the reclamation of land under the Arable Waste Land Rules; and that when there is anything in it which is inconsistent with any rights or obligations of a *jotdār*, *chukānidār*, *dar-chukānidār*, *adhiār*, or other tenant of agricultural

land as defined in settlement proceedings heretofore approved by Government, or with the terms of a lease heretofore granted by Government, to a *jotdār*, *chukānidār*, *dar-chukānidār*, *adhiār*, or other tenant of agricultural land, such rights, obligations, or terms shall be enforceable notwithstanding anything contained in it. The rent law of the Jalpāigurī district is, therefore, the Bengal Tenancy Act, but, in the Western Duārs, it does not apply to lands leased for the cultivation of tea or for the reclamation of waste land. As all previous rent laws have been repealed, it appears that there is no definite rent law for such lands.

WAGES.

A statement of the wages current during the ten years from 1893 to 1902 is given in Table X of the Statistical Appendix. From figures furnished by the Deputy Commissioner's office, it appears that there has been no change in the rates of wages between 1902 and 1908. This is not correct; ordinary coolies will not work in the Jalpāigurī town for four annas a day and it is difficult to get them for five annas or even six annas a day. At the census of 1901 it was found that general unskilled labour formed the small proportion of 2·4 per cent of the population. The demand for labour is very great and there is practically no local supply, nearly all the coolies coming from the United Provinces or from Behār. During the busy season, coolies can earn as much as one rupee a day by working in the jute godowns. In 1906 very high pay was offered for earthwork by the railway authorities, who wished to obtain as much labour as possible in order to repair quickly the damage done by the floods, but very few local coolies were attracted and nearly all the labour had to be imported. The District Board is unable to begin the annual repairs to the roads before the end of November or beginning of December as local labour is not procurable. and it is necessary to wait until gangs of coolies, mostly Nunias, come into the district from Behār. These men work through the cold weather and return to their homes before the rains set in. When unskilled labour is in such request, it is natural that skilled artisans should raise their prices. A Chinese carpenter gets Rs. 2-8 a day in Jalpāigurī, and even then his work is found to be cheaper and better than that of a native workman. *Gharāmis* or thatchers work in gangs, and are paid by contract; it is not usual for them to work for daily wages. On the tea-gardens the average rates are Rs. 6 a month for men, Rs. 4-8 to Rs. 5 for women, and Rs. 2-8 to Rs. 3 for children, but in the plucking season, a woman can easily earn Rs. 10 a month and good pluckers sometimes earn as much as Rs. 20; men can earn double pay when the gardens are being hoed. In addition to their pay the coolies get free medical attendance and free houses and fuel. Labour on tea-gardens in the Western Duārs is free and the ordinary coolie does not work more than 18 or 20 days on the average in a month. The land-

less agricultural labourer hardly exists; his place is taken to some extent by the *adhiār*, who cultivates a piece of land and receives half the produce. Want of sufficient agricultural labour has much retarded the extension of cultivation in the Western Duārs.

PRICES.

Prices of food-grains have risen enormously particularly in the last three years. In 1859-60 the best rice could be bought for from 12 to 14 annas a maund and common rice for from 8 to 10 annas a maund; best paddy fetched 4 to 6 annas a maund and common paddy 2 to 4 annas a maund. By 1870 prices had nearly trebled; best rice sold at from Rs. 2-8 to Rs. 3 a maund, and common rice at from Re. 1 to Re. 1-8 a maund. During the ten years from 1893 to 1902 the average price of common rice was 13½ seers for the rupee or about Rs. 3 a maund; in the next three years there was little change, but in 1906 the price rose to 9 seers for the rupee and in 1908 to 7½ seers or over Rs. 5 a maund. Other food-grains have also risen in price, but very few of the people consume them; in 1908 the average price of wheat was 6 seers for the rupee, and of gram 7½ seers. The rise in prices has, on the whole, benefited the majority of the people who depend on agriculture for a living; the cultivators have obtained more money for their produce and the *adhiārs* have not suffered as they are paid in kind. The class which has felt the pinch most is that of persons with small fixed incomes such as the more poorly paid clerks; to assist them an allowance of Rs. 3 a month has been granted to clerks in Government offices, who draw Rs. 30 a month, or less, while menial servants, whose pay is not more than Rs. 15 a month, receive an allowance of Re. 1-8.

Apart from food-grains, the prices of other articles of food are very high, and Jalpāigurī is as expensive a place for a European to live in as Dibrugarh in the Assam Valley. Milk sells at 5 or 6 seers for the rupee, mutton or goat at 8 annas a seer, and Darjeeling mutton at 13 annas a seer; eggs are 2 pice each, and fowls, 6 to 8 annas each; ducks cost 10 annas each, and pigeons, 10 annas a pair. Fish is very expensive; in the rains the only fish procurable is *hilsa* which is packed in ice and brought by train from Sārā Ghāt. In the Western Duārs prices are also high. In the Dāina-Torsā sub-district, which occupies a central position in the tea-garden area, milk sells at 2 annas a seer, potatoes at 1½ annas, *dāl* at 2½ annas, and salt at 2 annas; large fowls cost 8 annas each, eggs 2 pice each and kids Rs. 3.

MATERIAL CONDITION OF THE PEOPLE.

The Jalpāigurī district is rapidly increasing in prosperity; owing to the abundant rainfall and fertile soil famines are unknown; there is a great demand for labour, wages are high, and the people are well-to-do. In the two large *zamindāri* estates rents are low, and though many of the *jots* have passed into the hands of middlemen, such as Mārwāri merchants, pleaders, and

traders living in the Jalpāigurī town, the cultivators are not badly off. The demand for labour and the waste land still remaining in the district prevent the oppression of the *adhiār*, for, if his employer does not treat him well, he can always take service under another employer or migrate into the Western Duārs and take up land under Government. The increase of population is the best example of the prosperity of the Western Duārs; between 1891 and 1901 the increase amounted to 38·5 per cent. The rise of the tea industry has led to the introduction of numbers of coolies from Chota Nāgpur, the Santhāl Parganas and Nepāl, many of whom, after working for some years on the tea-gardens, take up land and settle in the district. The fertile waste lands have attracted cultivators from the neighbouring districts of Rangpur and Dinājpur and from the Cooch Behār State. It is difficult to estimate to what extent the money-lender is succeeding in getting a hold on the land, but he has probably been more successful in the permanently settled portion of the district than in the Government estates. In the Bāikanthpur estate many of the *jots* are held by middlemen, while in the Cooch Behār *zamindāri* nearly all the land in the vicinity of Sāldanga has passed into the possession of a Mārwāri firm locally known as the Sāldanga Kayā. At the last settlement of the Western Duārs, it was remarked that the number of resident *jotdārs* was 21,724 and of non-resident *jotdārs* 1,615 or less than 8 per cent; it would be more interesting to know how many *jots* and how much land are held by absentees. The whole *taluk* of Godāirkuti, measuring 2,791 acres, is held by a Mārwāri merchant whose chief place of business is at Cooch Behār in the feudatory State of the same name. In the Fālākātā *tahsīl*, where there has been more speculation in land than in other parts of the Western Duārs, about 80 *jots* are held by a man whose father was an ordinary constable and nearly the same number are in possession of the heirs of an up-country man from the Ballia district in the United Provinces who began in Jalpāigurī as a petty contractor. *Jots* vary greatly in size, the largest being the Godāirkuti *taluk* mentioned above; the average holding of a *jotdār* is 38·6 acres and of a *chukānidār* 11·4 acres.

The extent to which *jots* are passing into the hands of outsiders can be seen from the statement below which was made in 1905 for the Fālākātā *tahsīl* :—

Class of people.			Number of jots.	Area in acres.
Rājbansi	...	...	1,638	58,665·23
Muhammadan	...	...	1,092	40,739·47
Mech ...	...	...	381	7,509·52
Jaldhā ...	...	...	19	577·16
Gāro ...	...	...	17	302·28
Santhāl ...	...	..	2	24·52
Orāon ...	...	...	263	6,182·99
Nepāli ...	...	...	140	4,990·49
Mārwāri ...	...	...	115	6,551·13
Up-countrymen	...	...	272	14,097·20
Kabuli ...	...	...	14	381·41
Assamese ...	...	...	18	1,132·65
European	...	..	7	1,036·19
All others	...	...	136	5,074·22
	Total	...	4,114	173,523·46

From these figures it will be seen that about 15 per cent of the settled area in this *tahsīl* is in the hands of Mārwāris, up-countrymen, Kabulis, and "other persons" many of whom are Bengali Babus. The greatest sufferers are the Meches who are improvident and intemperate and who fall an easy prey to the speculator or the money-lender. The *jots* in possession of Muhammadans include the large estates held by the heirs of the late Colonel Hedāyet Ali.

INDEBTEDNESS. Tea-garden coolies.

There is a good deal of indebtedness among Pahāria (Nepālese) coolies on tea-gardens in the Duārs, though not nearly so much, apparently, as in the Darjeeling district. Mr. H. Bald, Manager of the Chunabati Tea Estate, who came out to this country in January 1882, and has had most of his experience in the Darjeeling district—he came to the Western Duārs about 1900—writes :—"There is no doubt about it that the indebtedness of the *sardar* to the money-lender, and the indebtedness of the coolie to the *sardar* are the greatest evils retarding progress amongst the coolies. The debt hangs as a heavy weight round their necks and, as a result, more drink is taken than otherwise would be taken, and this in time leads to gambling and a general want of thrift. I

came out to this country in January 1882, and at that time, although coolies earned less money than they do now on tea-gardens, they were undoubtedly better off than they are now. More women wore gold and silver ornaments, the property of their husbands. It is sad to think that the coolies as a class are poorer and less thrifty than formerly, after all the efforts put forth by Government for their benefit. It is so all the same and I put this down to the money-lender, the indebtedness leading to increased drinking and a general want of thrift. The debts press harder on the coolies now than in former days as so many carry debts contracted not only by themselves but by their fathers who are dead and for whom they have become responsible." These remarks apply mainly to Pahāria coolies, who are very extravagant and improvident. Among the Chota Nāgpur and Santhāl coolies, who form the bulk of the labour force in the Duārs, indebtedness is not a serious evil. The usual rate of interest charged by Mārwāris and shopkeepers is Rs. 5 per cent per mensem on loans of Rs. 100 or more and one anna in the rupee per mensem if the sum borrowed is less than Rs. 100; these rates are equivalent to 60 and 75 per cent per annum. The money-lender seldom fails to get his money back as he secures himself against loss in every way possible. He is generally in no hurry to get the principal paid up and tells his debtor not to worry about it but to go on paying the interest. If the man has plenty of cattle and is well-to-do, he often encourages him not to pay the interest for a time; the interest due is then added to the principal and the victim executes a new bond in which he acknowledges receipt of the whole sum as a loan with the result that he has to pay compound interest on the original sum borrowed and his debt mounts up faster than ever. When the debtor gets old or takes to drink, the money-lender sets to work to squeeze him, depriving him gradually of all his cattle, his wife's golden ornaments and other property. As a last resort, when he can get no more out of his debtor, the money-lender threatens to file a suit against him in the Civil Court and this threat always has the desired result if the debtor can by any possibility get the money from his relations, who are generally willing to help rather than see one of their people sent to prison. In some cases the creditor secures himself by getting the debtor's wife or son to sign a paper stating that, if the husband or father fails through death or any other cause to pay the debt, they will be responsible for it.

The Government estates.

Outside the tea-garden area the cultivators are not as a rule heavily in debt and seldom owe more than they can pay off after selling next season's crops. Standing crops are not mortgaged as is so often the case in Behār, and the circumstances of the people are shown by the fact that they are able to hold up their jute, when they think that they will get better prices by doing so, and to refuse to sell rice for export, when they run the risk of falling short themselves if they

part with it. From enquiries made, in 1905, the rates of interest in the Māinagurī and Alīpur *tahsīls* vary from 18 to 37½ per cent per annum and in the Fālākātā *tahsīl* from 12 to 75 per cent, the average rate per annum being 36 per cent. It is doubtful if a cultivator is ever able to borrow at such a low rate of interest as 12 per cent, and it is probable that he has often to pay more than 37½ per cent. In the Government estates the tenantry are most in debt in the *taluks* bordering on the Darjeeling Tarai. Out of 227 *jots* comprised in the *taluks* of Totgāon, Udlabāri and Sāoga Fulbāri in the Māinagurī *tahsīl*, 102 or 45 per cent were transferred in 1904-05 and the *tahsīldār* reported that many of them had passed into the hands of professional money-lenders. During the same year the *tahsīldār* of Fālākātā gave a list of 71 *jots*, covering 1,882 acres, which had been sold to known money-lenders, the sellers being chiefly Meches. In some cases the sellers sink to the position of *adhiārs* and are at the mercy of the new *jotdārs*, who can turn them out at any time, but Meches generally leave the land and go elsewhere as they do not like living with people of other races. *Chukānidārs* appear to mortgage and sell their holdings freely to money-lenders.

Remedial measures.

The chief reason which maintains the rate of interest at such a high pitch seems to be that the money-lending business is almost entirely in the hands of the Mārwāris, who are few in number and form a close ring. It has been suggested that legislative action should be taken to limit the rate of interest which can be recovered by civil suits. This might have some effect, but the Mārwāri would probably evade the law by getting his debtor to sign a bond in which he admitted receipt of a larger sum than he had actually borrowed, and the court would find considerable difficulty in ascertaining the amount which had been really lent

In the Government estates much might be done by restricting the right of the *jotdār* to transfer his holding; if the money-lender could not get possession of the land, he would not lend such large sums and the cultivator would not be able to borrow as recklessly as he sometimes does now.

CHAPTER X.

OCCUPATIONS, MANUFACTURES AND TRADE.

OCCUPATIONS.

The proportion of the population of the district which is supported by agriculture, whether as rent-receivers, cultivators tilling their own lands, or labourers on the tea-gardens, is extraordinarily large. At the census of 1901 it was found that more than 700,000 persons, or no less than 89·4 per cent of the population were engaged in agricultural pursuits, of whom 133,207, or over a sixth, were dependent on the tea-gardens for a livelihood. Of the remainder, industries maintain 4·6, commerce ·3 and the professions ·6 per cent. These figures may be compared with the percentages for the Province of Bengal which are—agriculture 71, industries 12, commerce ·8 and the professions 1·7 per cent. 42 per cent of the agricultural population are actual workers and these include 6,000 rent-receivers, 196,000 rent-payers, 90,000 persons employed in the tea-gardens and 2,000 agricultural labourers. The *adhiārs*, of whom there were 22,170 in the Western Duārs alone at the time of Mr. Sunder's settlement, have been classed as rent-payers in the census figures. On account of the great demand for labour on the tea-gardens and of the system of employing *adhiārs* in ordinary cultivation, the number of persons supported by earthwork and other general labour forms only 2·4 per cent of the total population. Of those engaged in industry 60 per cent are workers, and these include fishermen, cotton weavers, tailors, potters and carpenters. Of the commercial population, 59 per cent, and of those supported by the professions, 54 per cent, are actual workers.

The village community can scarcely be said to exist in the Jalpāigurī district. The country is divided into small farms, each with its central homestead, the residence of the tenant-farmer, surrounded by the homes of his relations and farm labourers, and perhaps a few under-tenants. The result of this system is the absence of the functional castes; there are no village servants—barbers, washermen and sweepers—such as are to be found in every village in Behār. In the Jalpāigurī town the municipal sweepers are imported from Behār or Calcutta; the washermen are nearly all Behāris and very few of the servants of the European community are natives of the district. The local population of Rājbansis, Muhammadans and Meches can make a living too easily by cultivation to have any incentive to learn a trade. Carpentering work is in the hands of Chinamen and up-country men, and most of the sawyers, employed in the forests, are Nepālis.

MANUFACTURES. TEA.

The most important industry in the district is the manufacture of tea. Tea was introduced into the Western Duārs from the Darjeeling district, where the industry was first established as a

commercial enterprise in 1856, and the gardens now extend, throughout the north of the district between the Tīsta and Sankos rivers, wherever the land is not occupied by reserved forests or river-beds. The first garden started in the Darjeeling Tarai was opened out in 1862 at Champtā, near Khaprail, by Mr. James White, who had previously planted out the Singel estate near Kurseong, and by the end of 1866 several other gardens had been opened out in the Tarai. Between 1866 and 1874 the number of tea-gardens in the Darjeeling district almost exactly trebled, the area under cultivation increased by 82 per cent, while the outturn was multiplied nearly ten times. It was natural that planters should turn their attention next to the waste lands of the Western Duārs, which border on the Tarai, and in 1874 a garden was opened out at Gazilduba by the late Mr. Richard Haughton, the pioneer of the tea industry in the Jalpāigurī district. The Gazilduba tea-garden was owned by Dr. Brougham, who had started the Dhutaria garden in the Darjeeling district in 1859. Fulbāri was the next place to be planted and was opened out by the late Mr. Pillans, who gave his name to the market called Pillans Hāt, and was owned by Colonel Money. Bāgrakot followed, opened out by the late Mr. North and owned by Mr. S. Cresswell.

It was soon found that the soil and climate of the Western Duārs was suitable to the growth of tea; Government offered land to investors on favourable terms and the industry developed rapidly. In 1876, two years after the Gazilduba garden was planted, there were 13 gardens with an area of 818 acres and a yield of 29,520 lbs. of tea. By 1881 the number of gardens had increased to 55 and the acreage under tea to 6,230 or, in other words, the number of gardens had more than quadrupled and the area under cultivation had increased more than seven times in five years. At the time of the last settlement in 1892, 182 grants of land had been leased for the cultivation of tea, comprising a total area of 139,751 acres, or 218 square miles, of which 38,583 acres, or 60 square miles were actually planted with tea, giving an outturn of over 18 million pounds. The cultivation was very rapidly extended during the nineties, and in 1901 the number of grants had increased to 235, with a planted area of 119 square miles and a yield of over 31 million pounds. The table below illustrates the rise of the tea industry during the last 30 years:— Extension of Cultivation.

Year.	Number of gardens.	Acreage under tea.	Outturn of tea in lbs.
1876 ..	13	818	29,520
1881 ...	55	6,230	1,027,116
1892 ...	182	38,583	18,278,628
1901 ...	235	76,403	31,087,537
1907 ...	180	81,338	45,196,894

After 1880 the cultivation of tea extended rapidly in the tract between the Tīsta and Dāina rivers, but there was then a check as the country to the east of the Dāina was believed to be devoid of water. Mr. C. J. O'Donnell, I.C.S., who partially revised the Gazetteer in 1888, wrote:—"This important industry has increased so much of recent years as to change almost completely the physical characteristics of the submontane country over a great area thirty miles long extending from the debouchment of the Tīsta from the Darjeeling hills to a similar point on the Dāina river on the frontier of Bhutān. The greater part of the primeval forest has disappeared and mile after mile has been replaced by great expanses of tea-gardens. East of the Dāina a similar tract stretches for about the same distance as far as the Rājābhātkhoa forest reserve due north of Alīpur. It is remarkable for its waterless character which prevents its occupation for tea or any other form of cultivation. A few springs are, however, found in limestone formations which occasionally crop out on its northern boundary. They are, however, almost immediately absorbed by the surrounding porous soil, and do not again appear on the surface for seven to eleven miles south of their sources." Tea-gardens now extend throughout this tract of country and find no difficulty in obtaining an adequate supply of water. Some of them obtain their water from springs in Bhutān and bring it down in pipes; the coolies prefer this method as they have no trouble in getting the water. Water is also obtained from wells, though the level is as a rule lower than in other parts of the Western Duārs. The two grants known as Kathalbāri I and Hartalgurī I were given up by the Chunābātī Tea Co. because water could not be found on them, but the reason for this seems to be that there is a large depression between them and Chengmāri which drains away the water. These grants have been leased recently to the Ambāri Tea Company. At Chunābātī good water is obtained from wells 65 feet deep, but the coolies seldom use it as they prefer the pipe water. The New Duārs garden has a well 65 feet deep; Banarhāt gets water at 70 feet and in one part of this garden there is a well which is only 25 feet deep. Gandrapārā has a well 73 feet deep and on another part of the garden, two miles away, can get a permanent supply at about 15 feet. The Dalgāon garden can get water at about 20 feet. There are four wells on Palāsbari II grant and water is found at from 50 to 70 feet.

From the table given above it will be seen that the area under tea nearly doubled between 1892 and 1901, while after this period the extension of cultivation has been comparatively slow. The apparent decrease in the number of gardens is due to the fact that the figures represent the number of grants or temporarily settled estates. The number of gardens is really 103, some of which consist of several grants which have not been amalgamated. Most of the available land in the district, which is

suitable for tea, has been taken up and for several years previous to 1907-08 there were no applications for new grants. During 1908 three new grants, each of which measures about 1,500 acres, were leased for tea cultivation. The increase in the outturn of tea since 1901 is due mainly to young tea coming into bearing and to the gradual extension of cultivation on existing grants.

All the tea gardens in the district are situated in the Western Duārs with the exception of the small garden of Dānguajhār, $4\frac{1}{2}$ miles from the Jalpāigurī town, which is in the Bāikanthpur estate. In addition to 81,338 acres or 127 square miles actually under tea, the gardens include 154,718 acres or 241 square miles, which have been taken up by planters but have not yet been planted with tea. Much of this extra land is required in order to provide fuel, but a good deal remains, which is well adapted for growing tea, and it is probable that this will be planted gradually, if the prospects of the industry seem favourable and the gardens are able to obtain sufficient labour. Apart from existing grants there is not much more land which is suitable and available for tea; the district certainly includes large areas in every way well adapted for the purpose, but these are included in the valuable reserved forests. Present position of the industry.

Since the year 1897 the tea industry has gone through a period of severe depression. The high prices and general prosperity, which were the features of the eighties, and early nineties, led to reckless extensions of cultivation in India, Ceylon, and Java, with the result that the supply of tea became greater than the demand. Prices fell enormously and the position was rendered more acute by the fixing of the standard of exchange and by the crushing increase in the duty on tea which was imposed in Great Britain. The duty has since been reduced to some extent but it is still considerable and it seems hard that the product of a great industry which has been built up by the industry and with the capital of our own countrymen should be so heavily taxed while the produce of foreign countries is admitted free or pays only a comparatively small duty. The natural extension of the tea trade, the opening of new markets on the continent, and the success which has followed the efforts to supplant Chinese tea in Russia, America and Australia have resulted in a greatly increased demand for Indian tea so that the prospects of the industry are much more favourable. An important factor in the situation is the planting of rubber trees in Ceylon, which is likely to result in a decrease in the crop of tea produced in that island. Prospects

The first gardens opened out in the district were planted with China tea which was for a long time considered to be the only kind suitable. This was superseded by hybrids from the Assam indigenous and China varieties which gave a larger yield and were found to be more profitable. In recent years the favourite varieties have been Assam and Manipur indigenous, Cultivation.

the latter of which is the most hardy of all, though the tea produced by it does not possess a fine flavour. The tea-gardens in the Western Duārs give a good yield but do not produce the same quality of tea as those of the Darjeeling district. The outturn per acre is seldom less than eight maunds and in good gardens averages about ten maunds; the lowest yield per acre is $4\frac{1}{2}$ maunds in old gardens planted with China tea. The soil best suited for tea is the reddish or dark brown loam which is found in the northern *taluks* of the Māinagurī, Fālākātā and Alīpur *tahsīls* along the Bhutan frontier; but any good deep soil will grow tea. Shallow soil is of no use as the tea plant develops a long tap root, four or five feet in length, by the aid of which it extracts moisture during dry seasons.

The tea plant is raised from seed which is sown in nurseries in November and December; germination takes place in a month or six weeks and, when about a year old, the young trees are planted out in rows, the distances between the plants averaging from 4 feet by 4 feet to 6 feet by 6 feet. The indigenous varieties give the best return if planted out at distances of not less than 5 feet by 5 feet. The plants are fit for light plucking in the 3rd year but do not attain full maturity until the 5th or 6th year; much depends of course, on the nature of the soil, timely rainfall, and good cultivation, the latter of which is impossible without an adequate labour force.

Pruning.

The China tea plant grows naturally to a height of about 15 feet; it branches low down and forms a thick shrub. The Assam variety is more like a tree; it has a clean stem for some distance from the ground and grows to a height of from 25 to 30 feet. The young plants are first pruned a year after planting, and each successive year they are allowed to grow a little higher until the required size is reached, the object being to produce thick bushes branching from the ground and about 3 feet high. Mature plants are pruned every year and dead wood and unnecessary twigs are cut away; occasionally heavy pruning is resorted to in order to remove the twisted and knotted wood and promote a growth of new clean stems. Pruning is lighter in the gardens in the Western Duārs than in Assam where the bushes are carefully cleaned out every year.

Plucking.

The plucking season begins in April, or occasionally, if the weather is favourable, at the end of March, and continues till about the middle of December. The work is done chiefly by women and children, who are quicker with their hands than men, but men are also employed when there is a rush of leaf and it is important to get it off the bushes quickly. The weight of leaf which a woman is expected to pluck in return for a day's pay is from six to ten seers, but it varies greatly in accordance with the season, the method, coarse or fine, of plucking and the class of tea; three times as much leaf can be plucked in a given time from the

large indigenous bushes as from the China variety. For every seer of leaf plucked in excess of the prescribed amount, the plucker receives two pice, and it is not uncommon for women, who are good pluckers, to earn as much as Rs. 20 in a month.

Manufacture.

The process of manufacturing tea has been so often described that it will be sufficient to give a very brief account of it here. After the leaf has been taken to the factory it is weighed in the presence of the Manager or one of his assistants and is then taken to the withering house where it is thinly spread upon trays and allowed to lie for a considerable time. It is usually withered in 10 or 12 hours but in very wet weather it may take as much as 48 hours and, on these occasions, in factories where there is not much withering space, considerable difficulty is felt in dealing with the leaf which is constantly coming in. Blackman's fans are now used on many gardens in order to facilitate withering. When the leaf has become soft and velvety it is placed on a rolling table and rolled in order to break the cells and bring the sap to the surface so as to induce fermentation; rolling also twists and curls the leaves. The use of machinery is a great advance on the Chinese method of rolling by hand. Fermentation begins as soon as the sap is liberated by rolling, and to complete it, the leaf is spread upon low tables until it assumes a bright coppery colour. During this process the temperature should not be more than 80 degrees (F.). The leaf is next taken to the firing machine where it is passed through a chamber heated to a temperature of about 250 degrees. When it comes out of this machine all moisture should have been eliminated and the colour should have changed from coppery to black. Although it is essential that the leaf should be fully dried, great care must be taken that it is not scorched as this destroys the flavour of the tea. The manufacture is now complete and the tea is sorted into the various grades, known as Broken Orange Pekoe, Broken Pekoe, Pekoe Souchong and Dust, which is done by means of a sort of sieve with compartments of different mesh. After this it only remains to pack the tea into chests which is done by machinery on most of the large estates.

THE LABOUR FORCE.

When the tea industry was started in the Western Duārs the coolies employed were Nepālis, but it was soon found that sufficient labour could not be obtained locally. A few gardens, which are practically in the hills, still work almost entirely with Nepāli labour, but, as a whole, the Duārs gardens are dependent on labour from a distance, the chief recruiting grounds being Chota Nāgpur and the Santhāl Parganas. The system of working is through *sardārs*. A *sardār* receives a commission, usually at the rate of one pice on each *hāziri*, or task, on the number of coolies whom he sends to work daily.

System of recruitment.

The *sardār* either recruits himself or selects, with the Manager's approval, men from his "*patti*" or gang to send down

as recruiters. If he goes to the recruiting district himself he generally takes with him men from his own gang to assist him, and it is usual to select men who have not been long enough on the garden to have lost touch with their villages. The garden advances the railway fares and diet money which are debited to the *sardār's* account. Formerly it was the custom for coolies to proceed by road, but most gardens find it better to use the railway as time is saved and fewer coolies are lost *en route* through desertion or cholera. If the recruiters are successful, the *sardār* benefits by getting his daily commission on the coolies' earnings and he also receives a commission of Rs. 2 to Rs. 5 a head. On the other hand, if a recruiter selected by him fails to return, the *sardār* has to refund the advances made to him. On the gardens it is to the interest of the *sardār* to see that the coolies do a full day's work and that they do not abscond; recruiters in most cases leave their wives and families on the gardens and the *sardār's* generally have property in cattle, carts and buffaloes. The best coolies are the Orāons, from the Rānchi district, who migrate freely to "Bhutān," as they call the Western Duārs, whenever they are hard up and wish to earn a little money. Losses are chiefly in Santhāl Pargana and Chaibassa recruiting. In one instance, in which there was a loss of about Rs. 3,000, the advances against the coolies ranged from Rs. 17 to Rs. 20 a head with the result that they absconded and the majority could not be traced. An experienced Superintendent considers that coolies will not remain on a garden if the advances on the average are much in excess of Rs. 10 a head. Rs. 500 to Rs. 1,000 may be taken as a fair estimate of the advances on a 1,000 acre garden, including those to local labour, Pahārias (Nepālis) and Gharāmis. There appears to have been a fair labour force up to 1899, but since then it is said to have declined owing to the competition of coal mines, the demand for labour for the docks and for railway construction, and the settlement of coolies on Government lands in the district. In 1899 a leading company imported 1,400 coolies from Chota Nāgpur at a cost of Rs. 2-6-9 a head irrecoverable, and Rs. 10-14-4 average advances, all recoverable from *sardārs* and coolies. In 1903 the same Company recruited 531 coolies, the irrecoverable cost a head being Rs. 10-6-1 and the advances Rs. 15-9-3, so that the increase in recruiting expenditure has been considerable.

Permanence of the labour force. The impression that the majority of the coolies on any garden visit their homes each cold weather and return after the harvest is over is incorrect. Coolies used to come up for about three years and then take long leave, but nowadays they do not return to their country so frequently as before and show a tendency to settle down. Orāons, in particular, are keen cultivators, and many have taken up land and settled in the district. Generally speaking, on most gardens the bulk of the labour force is

permanent, though a certain proportion of the coolies return to their homes every year. As a rough estimate it may be said that 10 per cent of the labour force is constantly on the move. The Deputy Commissioner, in discussing this subject in 1900, wrote as follows:—"Although a certain percentage of coolies move freely from garden to garden, either from a desire for change or belief that change of air is a prevention of malarial fever or some trivial motive, there is always a very considerable residuum, more especially on long established gardens, which does not find it easy to move. In those gardens one finds numbers of coolies who have become practically permanent residents. They have been living on the same plot of land for a number of years, and have a house superior to the average found in coolie lines, with a well cultivated plot of land of their own on the garden property. A migration to another garden would entail the loss of all this, and naturally it takes a good deal to move them. Again, a coolie has taken advances from the garden and has not repaid the money or the garden has lent him money to buy a pair of bullocks, taking the animals themselves as security. This is a very common practice. As long as the coolie remains on the garden the Manager is not likely to be hard on him, but if he attempts to leave for another garden, he could not hope for any consideration. He, therefore, is practically bound to stop where he is."

Absence of Labour Laws.

Labour in the Western Duārs is free and the services of the coolies are not secured by any form of agreement; in a few instances coolies were imported from Ganjam under contracts subjecting them to penalties for desertion, section 492 of the Indian Penal Code, but the courts apparently refused to enforce the contracts when the coolies absconded, and the attempt to introduce a penal contract system failed. There is no Government supervision over emigration to the Duārs, and the treatment of coolies *en route* to the gardens is not regulated by any special provisions of law. Restrictions exist as regards recruiting in the Tributary Native States, which would otherwise be a fine field for recruitment, and complaints were made some years ago of the attitude of officials in the Santhāl Parganas. On the other hand it is admitted that every assistance is given in the districts of Chota Nāgpur, which are the principal recruiting grounds for the Duārs. With free labour it is unnecessary for Government to reserve the right of inspection, or of interference in the matter of wages, tasks, or the general management of estates. Any abuse of authority would entail its own punishment, as the coolies would desert the estate and would find no difficulty in obtaining employment elsewhere. Coolies in the Duārs do not work more than 18 or 20 days in the month on an average. The men work well for about four hours, but if attempts are made to exact much heavier tasks dissatisfaction results, and the coolies may strike or proceed to other gardens where the tasks

are easier. Riots are very uncommon, and the arrival of discontented bodies of labourers at cutcherry to formulate complaints is unheard of. The most serious disturbance in recent years was in no way caused by disputes on the gardens. The price of rice was high throughout 1906 and, after the damage done to communications by the floods of August, it rose to famine rates. The Santhāl coolies belonging to the gardens in the vicinity of Dām-Dim and Chalsa united to raid the markets and succeeded in looting the big *hāt* at Batāigol and a few shops near Chalsa railway station. The Nepāli coolies were not concerned in the rioting and in several places helped to keep order; some of the Chota Nāgpur people joined in when they saw what was going on, but the disturbance was planned and started by the Santhāls. The rioters were quickly suppressed with the aid of the armed police, and the ringleaders arrested and punished. It was found necessary to call out some of the Northern Bengal Mounted Rifles to patrol the *hāts* on the next market day in order to prevent further looting.*

OTHER INDUSTRIES.

Apart from the manufacture of tea the other industries of the district are of little importance and are mainly directed to supplying the simple needs of a rural population. Gunny cloth of a very coarse quality is woven in the western *parganas* and the lower classes manufacture a coarse silk, called *endi*, for home use. This silk is obtained from worms grown on the castor oil plant and is dyed locally. A striped cotton cloth called *phota* is also manufactured for home consumption.

MINES AND MINERAL RESOURCES.

The only mineral of importance is limestone, of which large quantities are quarried, in the shape of calcareous tufa, along the base of the Bhutān hills. A small copper mine at Chunābāti, two miles from Buxā, was formerly worked by Nepālis. Coal has been found near Bāgrakot but it does not pay to work it.

TRADE.

The trade of the district is mainly with Calcutta, though timber is exported to Dacca and other markets in Eastern Bengal and tobacco to Burma. The principal exports are tea, jute, tobacco and *sāl* timber; and imports rice, cotton, piece-goods, machinery, corrugated iron, kerosene oil, and coal and coke. The development of the tea industry and the influx of a large coolie population into the Western Duārs, combined with increased facilities of railway communication, have given an impetus to trade generally, and the large markets, which have sprung up in the neighbourhood of the tea-gardens, provide the cultivator with a ready market for his rice, vegetables and other produce. The district is well supplied with railways, which have now monopolised most of the trade. The Eastern Bengal State Railway serves the permanently settled parganas west of the Tīsta; the Bengal-Duārs Railway and its branches run through

* For a further description of the labour force in the Western Duārs see the "Report on the conditions of Tea Garden Labour in the Duārs of Bengal, in Madras, and in Ceylon," by J. C. Arbuthnott, Esq., C.I.E., I.C.S.

the tract of country between the Tīsta and Torsā rivers; and the rest of the Alīpur Duār subdivision is served by the Cooch Behār State Railway. Tea and jute are railed to Calcutta; the trade in tobacco is chiefly in the hands of Arakanese, who export the leaves to Burma, where they are made into Burma cheroots. Most of the *sāl* timber goes by river to the markts of Eastern Bengal, but it will probably be sent by railway to Dhubri, if the Cooch Behār State Railway is converted to metre gauge. The local supply of rice is insufficient to meet the increased demand of the large tea-garden population, and rice is imported in considerable quantities from Dinājpur. Corrugated iron is largely used for the roofs of houses. Many of the tea-gardens are unable to obtain sufficient wood for fuel and have to depend on coal and coke, which come principally from the Rāniganj coal mines, though attempts have been made recently to introduce Assam coal. In addition to *sāl* timber, tobacco, mustard seed, jute cotton, and hides are also exported by water to Sirājganj, Dacca and other markets, the principal centre of the trade being at Baurā. The up-stream traffic is mainly confined to the import of earthen cooking utensils, cocoanuts, molasses, small quantities of *dal* (*Arabica revalenta*), and other miscellaneous articles from Dacca and Faridpur. Most of the trade with Bhutān passes through Buxā. Ivory, wax, wool, musk, rhinoceros horns, cotton cloth, *endi* silk cloth, blankets, honey, and brick tea are imported and bought by local merchants, who pay for them in cash or exchange them for rice, tobacco, English cloth or betelnut. Large quantities of indigenous wool from Bhutān, Tibet and Central Asia come into India by this route.

Trade centres.

The chief trade centres are Jalpāigurī, Titālyā on the Mahanadī river where the Ganges-Darjeeling road enters the district, Rājnagar, Sāldanga connected by road with the Chilahati station on the Eastern Bengal State Railway, Debiganj on the Karātoyā five miles from Domār station, Bāura the principal river mart of the district situated on a small tributary of the Tīsta, Jorpokri, Māinagurī, Fālākātā on the Mujnāi river and connected by road with Jalpāigurī, Madāri Hāt, Alīpur Duār, and Buxā through which most of the trade with Bhutān passes.

Many of the tea-gardens have large markets of their own, which are held once a week, and in addition weekly markets are held at many places in the Western Duārs, the most important of which are Amgurī, Matiāli, Barnes Junction and Ramshāi Hāt in the Māinagurī tahsīl; Madāri Hāt, Gāirkātā and Dhupguri in the Fālākātā tahsil; and Alīpur Duār, Silitorsa and Samuktola in the Alīpur tahsīl. Much of the jute from the part of the district west of the Tīsta is taken to markets on the Eastern Bengal State Railway just outside the district, the principal of which are Haldibāri and Domār.

FAIRS.

The most important fair in the district is that held at Jalpes at the Sivaratri festival in February. The fair lasts for about three weeks and is attended by numbers of people from all parts of the district as well as from Rangpur, Dinājpur and other districts of Northern Bengal. Bhutiās bring ponies, blankets and other articles and sell them at a good profit and the fair has increased considerably in importance during recent years. The great attraction at this fair is the Jalpes temple of which an account has been given in a previous chapter. Another fair is held at Fālākātā and begins about the middle of January. An agricultural exhibition is held in connection with it, and it is on the whole well attended by people of the neighbourhood. A fair was started at Santrabāri at the foot of the hill below Buxā for the purpose of encouraging trade with Bhutān. It was subsequently removed to Alīpur Duār, as Santrabāri is not an easy place for shopkeepers to get to, but it has not proved a success and has been discontinued.

CHAPTER XI.

MEANS OF COMMUNICATION.

RAILWAYS.

The district is well served by railways; the Eastern Bengal State Railway, the Bengal-Duārs Railway, and the Cooch Behār State Railway all pass through it.

The Eastern Bengal State Railway.

The northern section of the Eastern Bengal State Railway, or as it was then called, the Northern Bengal State Railway, was opened to traffic as far as Jalpāigurī in 1878 and was extended to its present terminus at Silīgurī, just beyond the border in the Darjeeling district, by the end of that year. It forms part of the through communication between Calcutta and Darjeeling, and the passenger traffic is very heavy, particularly at the times when the Government of Bengal moves to the hills at the beginning of the hot weather or returns to Calcutta at the end of the rains. Before it was constructed travellers to Darjeeling proceeded by rail as far as Sāhebganj on the banks of the Ganges and, after crossing the river, had to undertake the long and weary journey by road from Kārāgola Ghāt to Silīgurī. The railway enters the district near the Haldibāri station and runs in a northerly direction to Jalpāigurī where it curves to the north-west; south of Haldibāri, it runs parallel to, and within a few miles of the district boundary so that it serves the whole of the tract to the west of the Tīsta river. There are only three railway stations on the line within the district, *viz.*, Mandal Ghāt, Jalpāigurī, and Belakoba, but Silīgurī on the north and Haldibāri, Chilahati and Domār on the south are close to the boundary and roads run through the district to them. As the line is roughly parallel to the line of drainage of the country, the embankment is usually safe from damage by floods except on occasions when the Tīsta rises extraordinarily high and overflows its banks as it did in 1902 and 1906; in both these years the railway was badly breached near Mandal Ghāt.

The Bengal-Duārs Railway.

The Bengal-Duārs Railway was constructed in order to assist in opening up the Western Duārs and in developing the tea industry. With this object a contract was entered into between the Secretary of State for India and Messrs. Octavius Steel and Co. of London and Calcutta which provided for the construction of a railway from Barnes Junction on the river Tīsta opposite Jalpāigurī to Dām-Dim, with a branch from Latigurī to Rāmshāi Hāt which it was proposed to extend later on eastwards across the Jaldhāka. Under this contract specially favourable terms were granted to Messrs. Octavius Steel and Co.; Government agreed to give the land needed for the railway free of cost, to supply free timber for sleepers from the reserved forests during the first construction, and to hand over to the railway the working

of the Abduār ferry on the Tista between Barnes Junction and Jālpaigurī; it was also provided that the Jalpāigurī District Board should pay such amount, not exceeding Rs. 4,000 per annum, as might be required to raise the net profits of the undertaking to 5 per cent per annum on the capital outlay. This contract was entered into in April 1891 and a company was then formed and the construction of the railway begun. The line from the east bank of the Tista to Dām-Dim, 31 miles, with the branch from Latigurī to Rāmshāi Hāt, 5½ miles, was opened throughout for traffic in 1893. Supplementary agreements were entered into in March 1898, September 1900, and November 1901 by which the construction of extensions to the existing line were sanctioned. The southern extension from Barnes Junction to Lālmanir Hāt, 65¾ miles, was completed in 1900; the western extension from Dām-Dim to Bāgrakot, 6¾ miles, in 1902; and the eastern extension from Māl to Madāri Hāt, 44 miles, in 1903. The railway, therefore, now consists of a main line from Lālmanir Hāt, the junction with the Dhubri branch of the Eastern Bengal State Railway, to Madāri Hāt on the Torsā river and two short branches, from Latigurī to Rāmshāi Hāt and from Māl to Bāgrakot. On the 31st December 1909, and thereafter at intervals of seven years, Government has power by giving 12 months' previous notice to terminate the contract and take over the line, on payment to the company in the case of the original line of one and two-fifths of the invested capital and capital liabilities and in the case of the extensions of 25 times the average net earnings during the last preceding five years, provided that this sum does not exceed by more than 20 per cent the capital expenditure and capital liabilities of the company and is not less than the capital expenditure and capital liabilities.

During 1907 the railway carried 606,000 passengers and 144,000 tons of goods. The principal items of traffic were imports:—coal 14,910 tons, food-grains 19,507 tons, salt 4,458 tons, metal manufactured 3,397 tons, and cotton goods 952 tons; and exports:—jute 17,106 tons, tea 16,229 tons, and tobacco 6,342 tons. The coal was almost all for the use of the tea-gardens and the figures show the extent to which it is taking the place of wood for fuel; the food-grains were mainly rice for the tea-garden coolies. The exports of jute show how largely this crop is now grown in the Western Duārs.

The statement below shows the financial results of the working of the railway for the five years from 1903 to 1907 :—

Year.		Original Line.					
		Total capital outlay to date.	Gross earnings.	Nett earnings.	Nett percentage on capital outlay.	Earnings per week per mile.	Proportion of working expenses to earnings.
		Rs.	Rs.	Rs.		Rs.	
1903	...	26,95,547	3,09,965	2,23,786	8·30	156	27·80
1904	...	26,64,642	3,46,277	2,56,651	9·63	175	25·88
1905	...	27,26,891	3,70,343	2,49,598	9·15	196	32·60
1906	...	27,33,098	4,08,623	2,96,703	10·86	216	27·38
1907	...	27,56,535	4,20,705	3,05,788	11·09	222	27·32

Year.		Extensions.					
		Total capital outlay to date.	Gross earnings.	Nett earnings.	Nett percentage on capital outlay.	Earnings per week per mile.	Proportion of working expenses to earnings.
		Rs.	Rs.	Rs.		Rs.	
1903	...	79,30,172	3,47,832	1,05,916	1·34	71	69·55
1904	...	84,97,571	4,15,179	1,08,680	1·28	68	73·85
1905	...	87,92,080	5,12,343	1,97,824	2·25	85	61·39
1906	...	89,99,516	5,83,852	2,91,256	3·23	96	50·11
1907	...	90,70,826	6,04,133	90,883	3·21	99	51·85

The original line pays well and the extensions show signs of improvement. The eastern extension, which runs close to the foot of the hills, is costly to maintain and is liable to damage from floods. Many engineers think that it would have been wiser to

adhere to the earlier plan of extending the line eastwards from Rāmshāi Hāt. Although this would have entailed increased expenditure in the first instance as bigger bridges would have had to be built, the railway would have been farther from the hills and less exposed to damage from floods.

The Cooch Behār State Railway.

The Cooch Behār State Railway is a small feeder line, built on a gauge of 2′ 6″, running from Gitāldaha Junction on the Dhubri branch of the Eastern Bengal State Railway to Jāinti station close to the foot of the hills. From Gitāldaha Junction to Buxā Road station it runs nearly due north and from that point nearly due east to Jāinti. It enters the district at Alīpur Duār where there is a large bridge over the Kāljāni river. The line was badly damaged by the floods of 1906, but is usually safe from interruption unless the rivers rise extraordinarily high. It is proposed to convert this railway into a metre-gauge line. At present most of the timber from the Buxā forest is carted to Alīpur Duār and floated thence down the Kāljāni river, partly owing to want of sufficient rolling-stock on the railway, and partly to avoid the extra handling at Gitāldaha Junction. When the line has been converted to metre-gauge, it will be more convenient to rail the timber to Dhubri and put it on the river there.

ROADS.

West of the Tīsta the district is fairly well supplied with roads. In this part of the country conditions make it easy to maintain communications; there is little danger of floods and the rainfall is not so heavy as it is east of the river. In the Western Duārs where the country is split up into sections by large rivers, which frequently change their courses, road-making is a work of considerable difficulty and communications are often interrupted. In 1905 the Rāidhak river deserted its bed and poured across the country to the west of it, sweeping out of existence five miles of the main road to Alīpur Duār, and making it impossible to re-construct it on the former alignment. The floods of 1906 cut the roads to pieces, and much time and money were required to restore communications. Though communications in the Western Duārs are steadly improving, much still remains to be done; there is a great want of roads in the tract to the north-east of Alīpur Duār; with the exception of the Alīpur-Haldibāri, Jāinti-Rāidhak and Newlands-Chakchaka roads, the roads in this quarter are rude cart tracks which become quagmires in the rains and impede rather than aid traffic. A great change has been made by the opening of the Bengal-Duārs Railway; before its construction the tea-gardens of the Dām-Dim sub-district depended on the Jalpāiguri-Dām-Dim and Fulbāri Ghāt roads to send away their tea to or get in supplies from Jalpāiguri or Silīguri; now nearly all the traffic uses the railway. On the other hand, roads running at right angles to the railway, by which traffic can reach the different stations, have become of increased importance and much money has been spent on improving them.

BRIDGES.

Small bridges and culverts are constructed of masonry in the part of the district lying to the west of the Tīsta; the larger bridges are of *sāl* piles with iron girders. In the Western Duārs it has been found that masonry bridges will not stand the tremendous rush of water when the rivers come down in flood. The water is checked by a masonry pier, and creates a swirl on the downward side of it which scours out the pier and causes the bridge to fall in; *sāl* piles do not offer so much obstruction to the water and will stand when masonry piers are swept away. The usual type of bridge now built in the Western Duārs has *sāl* piles and iron girders with a plank footway; this type of bridge stood well in the floods of 1906. Many of the older bridges are constructed of timber throughout; they last from 10 to 15 years, but the beams gradually rot, and they have to be rebuilt. The newer bridges with iron girders have a much longer life and need fewer repairs.

ROADS UNDER THE PUBLIC WORKS DEPARTMENT.

Nine of the roads in the Western Duārs are under the Public Works Department, and the remainder are controlled by the District Board or by the Alīpur Duār Local Board, which is subordinate to it. The roads under the Public Works Department were all constructed in the interests of the tea industry.

Latiguri-Matiāli road.

The Latigurī-Matiāli road starts from the left bank of the Neora river, one mile south of the Latigurī station, and runs in a northerly direction past Chalsa station to the Matiāli Bazar, which is one of the largest markets in the disrtict, and is surrounded by tea-gardens. It is 19 miles long, and is bridged throughout; the last 5 miles over undulating ground from Chalsa station to Matiāli Bazar are metalled. There is very heavy traffic from the tea-gardens and bazar to the railway station, and great inconvenience was felt in 1906 when two bridges were carried away and the road was blocked.

The Rāmshāi-Sulkāpārā road.

The Rāmshāi-Sulkāpārā road runs due north from the east bank of the Jaldhākā river to Sulkāpārā, a distance of 10 miles. The Jaldhākā river is met with in the second mile of the road, and has to be crossed by a ferry. It was of great importance before the construction of the eastern extension of the Bengal-Duārs Railway, as the tea-gardens to the east of the Jaldhākā used it to get to the Rāmshāi Hāt station. It was threatened for several years by the encroachment of the Dāina river and was destroyed by the floods of 1906. It is maintained now only as a fair-weather track, and its place will be taken by a new road through the Tondu forest, with a ferry over the Jaldhākā river near Sulkāpārā.

The Sulkāpārā-Thāljhora road.

The Sulkāpārā-Thāljhora road is a continuation of the old Rāmshāi-Sulkāpārā road. It is 8½ miles long, and ends near the Bhutān frontier; it is metalled and bridged throughout where it passes over the undulating plateau, a length of 6·63 miles. A feeder road, one mile long, branches off from the 3rd mile of this road and runs to the Nāgrakātā railway station; it is metalled and bridged throughout.

The Nāgrakātā feeder road.

The Banerhāt-Chamurchi road.

The Banerhāt-Chamurchi road is an unmetalled road, 6¼ miles long, and is bridged throughout its length. It is a feeder road to the Banerhāt railway station, and is used by the gardens to the north of it, at the foot of the Bhutān hills.

The Rāmshai-Gāirkātā road.

The Rāmshāi-Gāirkātā road is 12 miles long and runs from the Rāmshāi Hāt railway station to the Gāirkātā tea-garden and bazar. In the first mile the Jaldhākā river has to be crossed by a ferry; the crossing is difficult when the river is high. In the third mile the Dāina river has to be crossed by a ferry in the rains. The greater portion of the road is unmetalled, but a length of 1¾ miles, where it runs through the Kutamārā forest, has been metalled.

The Gāirkata-Birpārā road.

The Gāirkātā-Birpārā road was constructed in order to connect the Gāirkātā Hāt with the tea-gardens to the north of it; it is an unmetalled road, 7½ miles long, and is bridged throughout with the exception of the Dāina river, which is fordable at all seasons of the year.

The Gairkātā-Dhupguri road.

The Gairkātā-Dhupgurī road is 8¼ miles long, and connects the country round Dhupgurī, where there is a large market, with Gāirkātā, thus allowing supplies to pass up to the tea-gardens. It is bridged throughout except at the Duduyā river, which has to be crossed by a ferry in the rains.

The Gāirkātā-Binaguri road.

The Gāirkātā-Binagurī road is a feeder road to the Binagurī station. Its length is 4½ miles, and it is unmetalled and bridged throughout. It was constructed by the District Board, but taken over afterwards by the Public Works Department in order to complete the circle of roads which unite at Gāirkātā.

ROADS UNDER THE DISTRICT BOARD. The Jalpāiguri-Alipur and Alīpur-Haldibāri roads.

The Jalpāigurī District Board maintains a total length of 24 miles of metalled and 778 unmetalled road. The principal road under local management is that running from the east bank of the Tīsta river opposite the town of Jalpāigurī in an easterly direction through the Western Duārs as far as the ferry on the Sankos river near Haldibāri. At this point it passes into the Eastern Duārs, which is now part of the district of Goālpārā. It is called the Jalpāigurī-Alīpur road up to Alīpur Duār, and thence is known as the Alīpur-Haldibāri road. The total length of the road within the Jalpāigurī district is 83 miles, the principal stages being as follows:—From Jalpāigurī to Māinagurī 7 miles; from Māinagurī to Dhupgurī 13 miles; from Dhupgurī to Falākātā 12 miles; from Falākātā to Silitorsā 8 miles; from Silitorsā to Alīpur Duār 14 miles; from Alīpur Duār to Samuktola 11 miles; from Samuktola to Kumārgrām 15 miles; and thence to the Sankos river 3 miles. Between Jalpāigurī and Alīpur Duār there are eight unbridged rivers, *viz.*, the Tīsta, Jaldhākā, Golandi, Duduyā, Mujnāi, Torsā, Silitorsā, and Kāljāni; the Tīstā, Duduyā, Torsā, Mujnāi and Kāljāni are crossed by ferries all the year round. The other rivers are fordable during the cold weather. Between Alīpur Duār and the Sankos there are three unbridged rivers, the Gadādhar, Dharlajhora

and Raidhāk. From Samuktola the road has been diverted in a large curve to the northwards in order to avoid the country which is swept by the Raidhāk since its change of course. The new alignment has been completed as far as the Kārtika tea-garden, and it is hoped to finish the work in another year; the road will then be in good order throughout its whole length.

Roads west of the Tīsta river.

West of the Tīsta the roads of most importance are the Bodā road, 31 miles in length, which runs to the south-west; it is bridged throughout except at Pochagarh, where there is a ferry over the Karātoyā river; the Silīgurī road, 23 miles long, which runs through Ambāri Fālākātā and the Titālya road, 26 miles long, which was formerly a Provincial road, but is now maintained by the Board. A good road, 19 miles long, runs from Bodā to the Domār railway station; it is bridged throughout except at Debiganj, where the Karātoyā river is crossed by a ferry; the traffic on this road is very heavy, especially in the jute season. Part of the Central Emigration road, 28 miles long, lies within the district; cattle and sheep are driven to Assam along this road, and it was formerly used by coolies going to the tea-gardens. Before the opening of the Eastern Bengal State Railway, an imperial road was constructed from Karāgola Ghāt on the Ganges to the foot of the hills in order to improve the communications between the plains and Darjeeling. This fine road enters the district at Titālya, 16 miles from Silīgurī, and its maintenance has been entrusted to the District Board. It has a formation width of 30 feet, of which 8 feet in the middle are metalled; it is well shaded by trees, and there is a considerable amount of traffic on it.

Roads in the Western Duārs.

In the Western Duārs the Board keeps up a number of roads in addition to those of which mention has already been made. A new road is being constructed from the Dām-Dim station to join a metalled road from the Fagu tea-garden in the Darjeeling district; it will serve several tea-gardens and will be an important feeder to the Bengal-Duārs Railway. The road between the Hantapārā tea-garden and Fālākātā has been much improved, and is now raised and bridged throughout; it joins Fālākātā with the railway station at Madāri Hāt and is used by the tea-gardens to the north, which cart their tea to Fālākātā and place it on the river there; its construction has contributed largely to the opening up of the country, which is nearly all under cultivation between Madāri Hāt and Fālākātā. West of the Torsā river a road runs to the Rājābhātkhoa station on the Cooch Behār State Railway; it is used by a number of tea-gardens and the traffic on it is very heavy. The last 7 miles to the railway station get much cut up during the rains, and this section requires to be metalled in order to carry the traffic. A fine road used to run from Cooch Behār to the military station of Buxā, but the railway has been constructed on part of it, and it is now in very bad order; on

the section between Rājābhātkhoa, the working headquarters of the Buxā forest division and Alīpur Duār, the traffic is heavy, as much of the timber is carted to Alipur Duār and floated down the Kāljāni river from that place. East of Alīpur Duār there are only two roads of any importance in addition to the Alīpur Haldibāri road. The Jāinti-Rāidhak road was constructed by the Public Works Department and runs between the two rivers from which it takes its name; it serves several tea-gardens and a large area of country, but traffic on it is much impeded by the difficulty of crossing the Jāinti river, which has to be passed in order to reach the railway station. The other road runs north and south through the Bhālka *pargana* from the Newlands tea-garden to Chakchaka on the border of Cooch Behār; it has been much improved in recent years and the old bridges have all been rebuilt. During the rains when the Rāidhak and Sankos rivers are often impassable for days together, the Bhālka *pargana* depends upon this road for its communication with Cooch Behār.

ADMINISTRATION OF THE ROADS.

The Public Works Department maintains 13·04 miles of metalled and 62·71 miles of unmetalled road; the new road through the Tondu forest is 8·31 miles long and has 33 bridges and culverts; it was completed in June 1908. The average annual cost of maintaining the roads under this agency is Rs. 12,856. The rest of the roads in the district are under the control of the Jalpāiguri District Board or of the Alīpur Duār Local Board which is subordinate to it. The Board has a staff of overseers and sub-overseers who work under the supervision of the District Engineer; difficulty is experienced in getting good men, as Bengalis do not like the Western Duārs and the climate does not suit them. Scarcely any labour is obtainable locally, and work does not begin until the end of November or beginning of December, when gangs of coolies come into the district from Behār. Most of the work is done through the agency of contractors, but some of the Managers of tea-gardens give considerable assistance, and work supervised by them is usually done efficiently, as they are greatly interested in the proper maintenance of roads. Some of the roads are maintained wholly or in part by grants made from the Government Estates Improvement Fund and the Western Duārs Market Fund also contributes towards works which benefit the markets. The bridge over the Jhordā river at Māinagurī enables people from the north and east to reach the market easily instead of wading through the water in the cold weather or crossing by a ferry in the rains; it cost over Rs. 8,000, of which Rs. 5,000 were paid from the market fund. Private roads in the tea-gardens are kept up by the tea estates concerned, and in the reserved forest the roads are maintained by the Forest Department.

CONVEYANCES.

In the plains the usual conveyances are ordinary country carts drawn by bullocks which are used throughout the district. Carting is heaviest during the rains when the tea-gardens are sending

their produce to Calcutta and jute is being taken to the markets. Most of the roads are unmetalled and the heavy rainfall makes them soft and muddy so that they cut up badly; in these circumstances the task of dragging a big load is not a light one, and is often too much for the small bullocks used in the Western Duārs. For this reason buffaloes are frequently employed, their great strength making up for their extreme slowness. On the road to Buxā human carriers are generally used for transport, though pack ponies are sometimes employed. Bhutiā men and women carry heavy loads up and down the hill and are paid four annas a trip. Europeans ride or drive, and in the more jungly parts of the district elephants are used for transport.

NAVIGATION. Although there are so many rivers and streams in the district few of them are fit for navigation. In the Western Duārs, for a distance of from 5 to 10 miles from the hills, the beds of the rivers are rocky and rapids occur; owing to the porous nature of the soil along the foot of the Bhutān hills east of the Jaldhākā, the water of all the rivers in this tract, with the exception of the Torsā, Gadādhar, Rāidhak, and Sankos, disappears from their beds at the point where they enter the plains and does not re-appear until the narrow strip of gravelly soil is past. The Tīsta is navigable by large boats as far as Jalpāigurī, the Duduyā up to the Jalpāigurī-Alīpur road, the Mujnāi as far as Fālākātā and the Kāljāni up to Alīpur Duār; the Torsā is navigable by cargo boats during the rains. There is no town in the Jalpāigurī district inhabited by a considerable community living by river traffic, but at the market of Bāura Hāt, situated on a small tributary of the Tīsta, in the Pātgrām police circle, there are a number of merchants who carry on an extensive trade in tobacco, rice and jute, which they collect from all parts of the district, and export by way of the river to Dacca and other eastern markets. Of late years this river trade has been decreasing, as the merchants prefer to send their goods by rail. *Sāl* timber is cut in the forests of the Western Duārs and Bāikanthpur and floated down to the Brāhmaputra river, whence the greater part of it goes to Dacca and Serājganj. Some tea is carted to Fālākātā and despatched in boats down the Mujnāi to be put on the river steamers at Dhubri.

FERRIES. There are 125 ferries in the district, of which 99 belong to the District Board, and the rest are Provincial; the District Board obtained a revenue of Rs. 18,740 in 1907-08 from its ferries and the Provincial ferries brought in Rs. 7,516. The principal ferries are on the Tīsta and Jaldhākā rivers. The Tīsta is not fordable within the district at any season of the year and 11 ferries are maintained on it, of which the most important is the Abduār ferry, opposite the town of Jalpāiguri, which is managed by the Bengal-Duārs Railway Company; 5 miles up stream is another ferry at Pāhārpur, and higher up still are other ferries at Premganj, Rangdhamali, Bāikanthpur, Kharchibāri, and Fulbāri. Below the

town and near the old military lines is a ferry at Halapākri, and lower down another at Madarganj, where the road to Cooch Behār crosses the river; below this, again, there are two more ferries at Kāntimārī and Boālmāri. The Jaldhāka, though a broad river, is very shallow and rises and falls in a few hours; during the rains ferries are maintained on it, but these are removed after the rains are over, as the river is fordable everywhere at other seasons of the year. The most important ferries are at the points where the Jalpāigurī-Alīpur, Rāmshāi-Gāirkātā and Rāmshāi-Sulkāpārā roads cross the river; a wire-rope ferry will be used to cross the traffic on the new road through the Tondu forest. The Karātoyā river is not fordable in the rains below Bhajanpur, where the road from Jalpāigurī to Titālya crosses it, and a ferry is maintained at this point, other ferries are maintained at Pochagarh on the Jalpāigurī-Bodā road, and at Debiganj on the Bodā-Domār road. Ferries are kept up throughout the year on the Duduyā, Mujnāi, Torsā, Kāljāni, Rāidhak, and Sankos rivers at the points where they are crossed by the main line of road which runs east and west through the Western Duārs. The water in these rivers is nearly always too deep for any one to cross on foot without difficulty, and for practical purposes they may be said not to be fordable at any season of the year.

BUNGALOWS. There is a fairly good dāk bungalow at Jalpāigurī, maintained by the District Board for the use of travellers, and a combined dāk bungalow and inspection bungalow at Alīpur Duār is in charge of the Public Works Department. In a district like Jalpāigurī where the rainfall is very heavy, good inspection bungalows are a necessity if officials are to go out on tour during the rains; unfortunately most of the existing rest-houses and inspection bungalows are wretched shanties with inferior posts, thatched roofs and mat-walls. There is a good *pucca* bungalow at Titālya on the Ganges-Darjeeling road, and a fairly good thatched bungalow at Pochagarh on the Jalpāigurī-Bodā road. In the Western Duārs a new bungalow, well raised from the ground on posts, with a corrugated iron roof and plank walls and ceiling, has been built recently at Māinagurī, and a similar building is being constructed at Dhupgurī. A bungalow of the same type, but with the addition of a large porch, has been constructed at Sātāli in the Mech and Gāro colony and paid for from the Government Estates Improvement Fund, and it is proposed to provide money from the same fund for new bungalows at Silitorsā and Madāri Hāt.

POST AND TELEGRAPH OFFICES. There are 56 post offices in the district. No detailed record exists, so that it is not possible to give the number of letters and parcels delivered annually. The value of the money-orders issued in the year 1907-08 was Rs. 19,91,453 and of those paid Rs. 5,20,920; tea-garden coolies remit considerable sums of money to their homes. Savings bank deposits amounted to Rs. 1,50,259 and the post office issued three life insurance policies.

There are telegraph offices at Jalpāiguri, Bāurā, Māl, Dam-Dim, Sāili Hāt, Pillans Hāt, Matiāli, Nāgrakātā, Laksān, Banerhāt, Birpārā, Gāirkātā, Fālākātā, Alīpur Duār, Buxā Kālchini, Pānabasti, and Dalsingpārā, and in addition telegrams can be sent from all the railway stations.

CHAPTER XII.

GENERAL ADMINISTRATION.

ADMINISTRATIVE CHARGES AND STAFF.

The Jalpāigurī district is a non-regulation district, and is included in the list of scheduled districts to which Acts of the Indian Legislature which do not apply *proprio vigore* may be extended by executive order with or without modification; it forms part of the Rājshāhi division, and was transferred to Eastern Bengal and Assam, when that Province was created in 1905. It consists of two well defined parts, *viz.*, the police circles of Jalpāigurī, Rājganj, Bodā, and Pātgrām which used to belong to the district of Rangpur and which are often called the regulation or permanently settled portion of the district, and the Western Duārs, annexed from Bhutān in 1865 which is a large Government estate. In the permanently settled *parganas* all the general Regulations and Acts applying to Bengal are in force, but some of them have not been extended to the Western Duārs, and others have been only partially extended to that area. For administrative purposes the district is divided into two subdivisions; the headquarters subdivision which includes the police circles separated from Rangpur, the small *tahsīl* of Ambāri Fālākātā formerly known as the Bengal Duārs, and that portion of the Western Duārs which lies between the Tīsta and Jaldhākā rivers; and the Alīpur subdivision which comprises the rest of the Western Duārs. The division between the two subdivisions is rather curious; the tract of country covered by the police circle of the Dhupgurī outpost is within the criminal and civil jurisdiction of the courts at Jalpāigurī, but for revenue purposes it forms part of the Fālākātā *tahsil* and is included in the Alīpur Duār subdivision. The Sadar subdivision, including the Dhupgurī outpost, extends over an area of 1,820 square miles, and is under the direct control of the Deputy Commissioner, who is assisted by a staff of Deputy Collectors stationed at Jalpāigurī. In 1907 a Special Magistrate was appointed for the Rājshāhi division, who has his headquarters at Jalpāigurī, and assists the Deputy Commissioner when not employed in other districts of the division. The Alīpur Duār subdivision, which has an area of 1,141 square miles, is in charge of a European Deputy Magistrate, under whom is a Sub-Deputy Collector, who relieves him of the charge of the treasury and helps in the general work of the subdivision. The Western

Duārs is divided into four *tahsīls*, of which the three largest, Māinaguri, Fālākātā, and Alīpur, are managed by Sub-Deputy Collectors, while Bhālka is in charge of a Ministerial Officer called the Naib-Tahsīldār. The small *tahsīl* of Ambāri Fālākātā (the Bengal Duārs) on the west of the Tīsta river used to be under the control of the Deputy Collector of Silīgurī, but since the partition of Bengal it has been managed by one of the Deputy Collectors at Jalpāigurī.

THE DEPUTY COMMISSIONER.

The Deputy Commissioner is the head of the local administration; he is also the District Magistrate and can pass sentences of transportation or imprisonment for a term not exceeding seven years, but there is not much crime in the district, and much of his time is devoted to the management of the Government estates. All applications for the settlement of waste lands are referred to him for orders, and he determines whether the applicant is a suitable person to become a tenant of Government, and if so, whether the whole or only a part of the land applied for should be settled with him; he decides whether the digging of an irrigation channel shall be permitted; frequently settles disputes among the tenants and so saves them from the expenses of litigation, and superintends the administration of the various funds which exist in the Western Duārs. As Chairman of the District Board he is responsible for the maintenance of many of the roads, for the expenditure of the money allotted to education, and for the proper working of pounds and ferries. He is also *ex-officio* Chairman of the Jalpāigurī Municipality, and in that office controls the affairs of the town.

SPECIAL FUNDS.

There are three funds peculiar to the Western Duārs, all of which are classed as excluded local funds; they are the Government Estates Improvement Fund, the Market Fund, and the Jotdārs' Fund.

The Government Estates Improvement Fund.

In addition to a grant of 1½ per cent of the total collections from Government Estates for the maintenance of roads and of one per cent for education, a sum of money is allotted every year for general improvements, and is spent on buildings, wells, sanitation, and other works which are necessary for the proper management of the estates, or for the benefit of the tenants. The amount granted in 1907-08 was Rs. 18,000 and an extra sum of Rs. 500 was subsequently added for improvements in the part of Jalpāigurī town, which was formerly the military cantonment, and which is now held by Government under a lease from the Bāikanthpur estate.

The list given in the margin shows the principal items of expenditure during the year, and illustrates the class of work for which this fund provides the money. In the previous year Rs. 5,000 was spent in buying the market at Alīpur Duār, which was not well managed in private hands. Contributions have also been made from this fund towards the building of hospitals and dispensaries, and every year a number of wells are sunk all for the benefit of the tenants. The Subdivisional Officer of Alīpur Duār for his subdivision and the *tahsīldār* of Māinagurī for his *tahsīl* submit lists of their requirements, which are scrutinized and revised by the Deputy Commissioner with the aid of the information which he has obtained when on tour. A list for the district is then prepared and submitted through the Commissioner of the Division to the Board of Revenue for sanction.

	Rs.
Compensation for lands resumed for quarters for Government employés ...	851
Clearing jungle in the Civil Stations of Māinagurī, Alīpur Duār, Fālākātā and Kumārgrām ...	669
Planting trees ...	770
Repairs to buildings, etc.	3,789
Sinking wells ...	2,200
Construction of tahsīldārs' quarters at Fālākātā ...	1,758
Construction of a new tahsīl office at Kumārgrām (part)	1,762
Construction of a record room at Kumārgrām ...	500
Construction of an inspection bungalow in the Mech and Gāro Colony...	2,500
Construction of outhouses for the tahsīldār's quarters at Alīpur Duār ...	570
Grant to the Santhal Colony school ...	180
Drainage	339

The Market Fund.

All proceeds derived from the Government markets are credited to a fund called the Western Duārs Market Fund; accounts are kept separately for each *tahsīl* and the receipts derived from any *tahsīl* are spent only on the markets of that *tahsīl*. The fund is a most useful one and the receipts are steadily increasing year by year; improvements made to the markets soon pay for themselves; the people know when they are comfortable and patronise the markets most when the arrangements are best. The chief work done is the construction of sheds with corrugated iron roofs and masonry floors, in which petty dealers can sit and sell their goods, and the provision of a good water-supply and a proper system of drainage. Besides work done in the markets themselves, the fund provides money for the improvement of communications giving access to the markets; in 1905-06 a grant of Rs. 5,000 was made towards the building of a bridge over the Jhordā river at Māinagurī, which enables people from the north and east to get to the market without inconvenience.

Nearly all the work paid for out of either the Government Estates Improvement Fund or the Market Fund is carried out under the supervision of the *tahsīldārs*, but large works, or works requiring engineering skill, are placed in charge of the District Engineer.

The Jotdārs Fund.

The Jotdārs' Fund was started by Mr. Sunder during the settlement of the Western Duārs in 1889—95; it is raised by voluntary

subscriptions from the *jotdārs*, and is expended for their benefit. Those *jotdārs* who wish to subscribe to the fund pay in their subscriptions along with the Government revenue, and the amounts which they pay are entered on the receipts which they get for their revenue. The fund is administered in each *tahsīl* by a Committee of which the *tahsīldār* is the Chairman, and which works under the supervision and control of the Deputy Commissioner. Most of the money is devoted to aiding dispensaries and schools, and, without it, it would be difficult to keep up those institutions. The fund is also used for sinking wells, supplying fruit trees to the cultivators, opening village roads and any other useful works which may be necessary from year to year.

REVENUE. The increase in the revenue of the district shows how greatly it has developed under British rule. In the year 1866-67 the total of the principal heads of revenue in the then district of the Western Duārs was Rs. 1,26,870 and the expenditure Rs. 31,010; in 1907-08 the land revenue paid by the tea-gardens alone amounted to over two lakhs, and that paid by the *jotdārs* to nearly four and a half lakhs of rupees. The present district of Jalpāigurī was formed in 1869, and in 1870-71 the principal items of revenue amounted to Rs. 3,29,940. With the rise of the tea industry and the opening up of the Western Duārs, there has been a steady increase in the revenue of the district. Under the four main heads of land revenue, excise, income-tax, and stamps, the revenue in 1892-93 was Rs. 7,79,805; in 1902-03 it was Rs. 11,64,567, and by 1907-08 it had increased to Rs. 12,82,936.

Land revenue. There are 82 permanently settled estates on the *tauzi* roll of the district, the land revenue payable by which is Rs. 1,36,750. The demand of land revenue payable by the *jotdārs* in the five *tahsīls*, which are estates under the direct management of Government, was Rs. 4,48,637 in 1907-08. In addition there are 180 temporarily settled estates, which are all grants leased out for the cultivation of tea; the amount payable by these in 1907-08 was Rs. 2,03,595. It has been stated in a previous chapter that a resettlement of the Western Duārs is in progress; the extension of cultivation has been so great that a large increase of land revenue would be obtained merely by assessing the cultivated lands at the existing rates. The rates, however, are very low, and leave plenty of room for enhancement. The total collections under the head of land revenue in 1907-08 amounted to Rs. 7,99,050.

Excise. After land revenue the excise duties on spirituous liquor, opium and ganja contribute the largest part of the revenue of the district. The income from this source in 1907-08 was Rs. 3,07,932, of which more than 75 per cent or Rs. 2,33,171 was realised from the sale of country spirit prepared by distillation from molasses and the flower of the *mahua* tree (*Bassia latifolia*). There were 46 country spirit shops, or one to every 64 square miles serving an average population of 17,117; as a rule, liquor of two strengths

is sold, the charge being one rupee or eight annas a bottle, the cheaper liquor is the one usually drunk. The system then in force in the district was that known as the "outstill system." The shops were sold every year to the highest bidders, who obtained the monopoly of the sale of country spirit in the area served by their shops and were permitted to distill as much of it as they could sell. The rough method of distillation practised produced a more or less impure liquor, and in order to ensure the supply of a pure spirit, it was decided to replace the outstill system by the contract distillery system; liquor of a certain strength and quality will be supplied to central depôts in charge of subordinate excise officers, who will issue it to the licensed shopkeepers. The new system was introduced from June 1st, 1909. There will be two depôts in the district, one at Jalpāigurī, and the other at Carron (formerly Luksān) station on the Bengal-Duārs Railway; the tract east of the Torsā river will be served by a depôt at Lālmanir Hāt. Besides distilled liquor the tea-garden coolies and some of the aboriginal tribes drink a considerable quantity of a native beer called *pachwai* which is brewed from rice. Persons belonging to the hill or other aboriginal tribes are allowed to brew it up to a limit of 20 seers without payment of any fee; a fee of Rs. 2 permits them to brew as much as they please for home consumption, while a fee of 8 annas enables them to brew more than the recognised limit for a festive occasion. 1,132 licenses for the home-brewing of *pachwai* were issued in 1907-08 and the fees paid amounted in all to Rs. 2,614. The consumption of ganja, *i.e.*, the dried flowering tops of the female hemp plant (*Cannabis sativa*) is mostly confined to people from up-country; the receipts from this source were Rs. 55,411. Opium brought in only Rs. 13,093; it is used by Chinese carpenters and some of the immigrants from the plains disricts of Bengal, but tea-garden coolies hardly ever touch it.

The increase in the excise revenue has been very marked; it was Rs. 1,44,534 in 1892-93, Rs. 2,49,486 in 1902-03 and Rs.3,07,932 in 1907-08, so that it has more than doubled in fifteen years. The incidence is four annas and eleven pies per head of the population, but this is not distributed evenly over the whole district. Rājbansis and Muhammadans drink little or no liquor while Meches drink all they can get. The chief consumers of country spirit are the tea-garden coolies and most of the liquor shops are in consequence situated in the north of the Western Duārs in the tea-garden area. It is difficult to say whether drinking habits are increasing among this class of the population; the expansion of the excise revenue has been very great, but the number of tea-garden coolies in the district has also increased enormously.

The position of the district makes it difficult to prevent the smuggling of spirituous liquor into it. A few years ago a line of liquor shops existed along the frontier in Bhutān just outside

British territory and country spirit was smuggled freely into the gardens. Subsequently, however, the Political Officer in Sikkim, who is also Political Officer for Bhutān, toured along the frontier accompanied by Rai Ugyen Kazi Bahadur, a Bhutiā official sent by the Tongsa Penlop. This tour had excellent results; several of the shops in Bhutān were closed and others moved farther away from the boundary of the district. Since then smuggling has decreased, but it still goes on, though to a less extent; in 1907-08 26 persons were convicted for smuggling liquor from Bhutān into the Jalpāigurī district.

In 1902-03, when the minimum income assessable was Rs. 500, the receipts from income-tax were Rs. 36,060 paid by 1,153 assessees. In 1903 the minimum was raised to Rs. 1,000 and the number of assessees fell to 432 and the receipts to Rs. 27,416. By 1905-06 the receipts had risen to Rs. 30,366, but in the following year there was a considerable decrease due to the losses sustained by many of the merchants in the Jalpāigurī town when the market with the shops surrounding it was destroyed by fire in April 1905. In 1907-08 the number of assessees was 511 and the collections amounted to Rs. 32,436. The district is growing in prosperity and in a few years' time the income-tax will yield as much as it did before the minimum assessable income was raised. More than half the receipts are under Part I, the bulk of the assessees being Managers and Assistant Managers of tea-gardens. It is extremely difficult to estimate the incomes of Mārwāris and other traders, and many of them probably pay less than they ought to do. Income-tax.

The total revenue derived from stamps in 1907-08 amounted to Rs. 1,56,611, of which Rs. 1,03,746 were realised from the sale of judicial stamps and Rs. 52,866 from non-judicial stamps. The average receipts for the five years ending in 1902-03 were Rs. 1,44,288 and for the next quinquennium Rs. 1,56,291. The highest amount realised in one year was Rs. 1,59,174 in 1904-05; the decrease since then has been confined to judicial stamps, and is due to decrease of litigation owing to the Bāikanthpur estate having come under the Court of Wards. Compared with the districts of Eastern Bengal the people of Jalpāigurī are not very litigious, and though the income from stamps will doubtless grow with the increase of population, it is not likely to increase rapidly. Stamps.

The road and public works cesses realised Rs. 1,63,016 in 1907-08, half of which was credited to Government in the Public Works Department, and the other half to the Jalpāigurī District Board. The total demand amounted to Rs. 1,73,603, of which Rs. 1,62,534 were payable by 291 revenue-paying estates and Rs. 8,871 by 169 revenue-free estates. The number of tenures assessed was 252 and the amount due from them Rs. 2,198. In the permanently settled part of the district the estates and tenures Cesses.

are valued in the usual manner, and the cesses are levied at the maximum rate of one anna in the rupee. The proprietors of temporarily settled estates and the *jotdārs* in the Western Duārs are assessed at the rate of one anna for each rupee of land revenue payable by them.

Registration.

There are four offices for the registration of assurances at Jalpāigurī, Bodā, Māinagurī, and Alīpur Duār. The Deputy Commissioner is *ex-officio* Registrar of the district; the office at Jalpāigurī is in charge of a Special Sub-Registrar who has powers to hear appeals from the other Sub-Registrars, and inspects their offices. The average number of documents registered annually at all the offices was 7,071 in the triennium 1899 to 1901, 9,685 in the next triennium and rose to 11,369 in the triennium 1905 to 1907. The marginal statement gives the most important statistics for 1907. The total number of documents registered was 11,287; the receipts exceeded the expenditure by Rs. 6,643.

Name of Office.	Documents registered.	Receipts.	Expenditure.
		Rs.	Rs.
Jalpāigurī ...	4,339	8,460	4,573
Bodā ...	3,620	3,900	1,776
Māinagurī ...	2,472	3,468	1,703
Alīpur Duār ...	856	956	2,089
	11,287	16,784	10,141

All the offices worked at a profit to Government with the exception of that at Alīpur Duār where the expenditure was more than double the receipts.

There are Muhammadan Marriage Registrars at Jalpāigurī, Chandanbārī near Bodā, and Fālākātā. They are paid certain fees for each ceremony which they register and are also allowed to receive gratuities. The annexed statement shows the work which they did and the amounts which they were paid in 1907. It will be seen, that comparatively few ceremonies are registered; it is a pity that the Muhammadans do not make more use of these Marriage Registrars; the parties often find it difficult to prove a marriage several years after the ceremony took place, but there seems to be a prejudice against this form of registration.

Name of Office.	Number of Ceremonies registered.	Fees.	Gratuities.
		Rs.	Rs. a. p.
Jalpāigurī ...	133	444	41 2 0
Chandanbārī ...	23	41	87 0 0
Fālākātā ...	49	147	15 8 0

ADMINISTRATION OF JUSTICE.

The chief Civil and Criminal Court is that of the District and Sessions Judge of Dinājpur, whose head-quarters are at Dinājpur, but who visits Jalpāigurī from time to time. Before the formation of the Province of Eastern Bengal and Assam in 1905, the

District was under the jurisdiction of the District and Sessions Judge of Rangpur, but after the transfer of Darjeeling to the Bhagalpur Division of Bengal, it was found more convenient to include Jalpāigurī in the jurisdiction of the Judge of Dinājpur.

Civil justice

The Code of Civil Procedure was extended to the Jalpāigurī district in 1882, but did not come into effect in the Western Duārs until much later, as its application was excluded in express terms by the Bhutān Duārs Act, XVI of 1869, "An Act to exclude the ordinary Civil Court from the cognisance of suits relating to land in the Bhutān Duārs, and for other purposes." The repeal of Act XVI of 1869 by Act VII of 1895, B.C., left the Code of Civil Procedure to be administered in the Western Duārs.

There are two Munsifs at Jalpāigurī, one of whom has power to try suits up to the value of Rs. 2,000, and the Sub-Judge of Dinājpur is also Sub-Judge of Jalpāigurī. The Subdivisional Officer of Alipur Duār has the powers of a Munsif and of a Small Cause Court Judge up to Rs. 50 within his subdivision and is authorised to sit at Alīpur Duār, Buxā and Fālākātā for the disposal of civil suits; appeals from his decision lie to the Judge of Dinājpur. Since the repeal of Act XVI of 1869 the Deputy Commissioner of Jalpāigurī has had no civil jurisdiction. The figures for the five years from 1903 to 1907 are given below and show that civil work in the district is practically stationary:—

Suits.		Munsif's Courts.	Small Cause Courts.	Sub-Judge's Court.
1903	Number	3,992	1,125	20
	Average value	Rs. 101	44	3,166
1904	Number	4,352	1,429	25
	Average value	Rs. 104	46	6,520
1905	Number	4,008	1,439	27
	Average value	Rs. 100	45	2,736
1906	Number	3,754	1,497	35
	Average value	Rs. 103	33	1,836
1907	Number	3,749	1,461	23
	Average value	Rs. 115	46	2,911
Average of 5 years.	Number	3,971	1,390	26
	Value	Rs. 105	43	3,434

The judicial staff entertained for the administration of criminal justice consists of the District Judge of Dinājpur, the Deputy

Criminal Justice and Criminal Courts.

Commissioner who is vested with special powers under section 34 of the Code of Criminal Procedure, the Deputy Magistrates stationed at Jalpāigurī, and the Subdivisional Officer of Alīpur Duār; in addition to these the Sub-Deputy Collector and the *Tahsīldār* at Alīpur Duār have powers as Magistrates of the second class and the *Tahsīldārs* of Māinagurī and Fālākātā as Magistrates of the third class. There is a bench of Honorary Magistrates at Jalpāiguri and another at Bodā vested with third class powers; the Manager of the Chaklajāt estates sits singly for the trial of cases at Debiganj and has first class powers.

The criminal work of the district is not heavy, but owing to its position on the frontier, dacoities are not uncommon; these are mostly the work of Nepālis and Bhutiās, who live across the border, but others are committed by Meches whose homes are within the district and who trust to be able to escape into Bhutān if suspicion falls on them. Successful attempts have been made in recent years to break up the gangs of dacoits and bring their members to justice. The most dangerous gang used to work in Nepāl and in the Darjeeling and Jalpāigurī districts; its leader, Balibant Mangar, was a Nepalese subject, who had received a long sentence for dacoity with murder in his own country, but had contrived to escape. After many attempts the Jalpāigurī police succeeded in arresting him and he was convicted for bad livelihood; he was subsequently handed over to the Nepāl authorities who applied for his extradition. This arrest broke up the gang for the time being, but Balibant's nephew, Jaman Singh Mangar, soon collected another gang and began to commit dacoities along the border of the district; he was hunted out of Jalpāigurī by the police and entered Nepāl where he and most of his followers were arrested; the few who escaped at the time have nearly all been run down since by the combined efforts of the Nepāl authorities and the Darjeeling and Jalpāigurī police. Urjan Ghurti, who was the last of the dacoits to remain at large, was arrested in the Alīpur Duār subdivision in August 1908. Another gang which gave considerable trouble was composed of Bhutiās who committed a number of dacoities along the frontier; its members have been recently arrested and convicted in Bhutān. Thirty-three crimes, mostly dacoities and burglaries, were traced to a gang which consisted of Meches and Gāros with one local Muhammadan; convictions were obtained in 20 cases and 12 members of the gang were afterwards prosecuted in a gang case under section 401 of the Indian Penal Code and were all convicted. Another gang of Meches committed a dacoity in the Tondu village; the offenders, one of whom had absconded and gone to Bhutān, were arrested and sentenced to terms of imprisonment varying from five to eight years.

OLICE.

For police purposes the district is divided into three circles, *viz.*, Jalpāigurī, Māinagurī and Alīpur Duār, each of which is in charge of an Inspector. The Jalpāigurī circle comprises three *thānās*,

Jalpāiguri, Bodā and Rājganj, and two independent outposts at Debiganj and Titālyā; there is also a subordinate outpost under Bodā at Jagdal, which is being removed to Pochagarh, as Jagdal is inconveniently situated and difficult of access. The Māinaguri circle includes the three *thānās* of Pātgrām, Māinaguri and Dām-Dim, and the independent outposts of Dhupguri with three subordinate outposts, Nāgrakātā under Māinaguri and Matiāli and Krānti under Dām-Dim. The Dām-Dim *thānā* is being transferred to Māl which will also be the head-quarters of the Inspector, and when this is done the Krānti outpost will be abolished. The Alīpur Duār circle consists of two *thānās*, Alīpur Duār and Fālākātā with two outposts at Buxā and Kumārgrām under Alīpur Duār. The Buxā outpost will be removed to Atiabāri on the plains where it will be in a more central position and a new outpost will be established at Madāri Hāt under Fālākāta. Thus there are in all 17 centres for the investigation of crime. The regular police force consisted in 1908 of a Superintendent of Police, four Inspectors, 27 Sub-Inspectors, 52 Head Constables, and 354 constables. It is divided into three distinct parts, the District Police Reserve consisting of 1 Inspector, 1 Sub-Inspector, 8 Head Constables and 100 constables, the ordinary Reserve of 1 Sub-Inspector, 9 Head Constables and 62 constables, and the force employed in the *thānās*, courts, and as treasury guards, numbering 3 Inspectors, 25 Sub-Inspectors, 33 Head Constables and 168 constables. In addition to these, two frontier guards are maintained during the cold weather at Chamurchi and Jāigaon; 2 Head Constables and 24 men are employed on this duty. In 1906 the strength of the District Police Reserve was only 1 Sub-Inspector, 2 Head Constables and 25 Constables, but, after the serious riots which occurred in that year among the Santhāl coolies employed on the tea-gardens, it was found necessary to increase it to its present strength. At the same time steps were taken to enlist only men who could be trusted in an emergency and; with the exception of 2 Head Constables, the force is now composed entirely of Gurkhas and Meches. The District Police Reserve is not employed on miscellaneous duties, but is kept ready to act in case a serious disturbance takes place; it cannot be employed without the authorisation of the Deputy Commissioner. Besides the regular police, there is a rural police or village watch consisting of 121 dafadārs and 1,503 chaukidārs. The total cost of keeping up the police force, including the chaukidārs who are paid by the villagers, is about $1\frac{3}{4}$ lakhs.

JAILS. The District Jail is at Jalpāiguri, and there is also a subsidiary jail at Alīpur Duār with accommodation for 22 prisoners. The District Jail was built in 1883 to replace the old buildings which consisted of a bamboo palisade of irregular height enclosing several bamboo-made barracks. It can contain 127 prisoners, 120 males and 7 females; there are cells for 6 prisoners and barracks

without separate sleeping accommodation for the remainder. The principal industries carried on in the jail are oil-pressing, surki-pounding, carpet-making, and bamboo and basket work. The average jail population is given in the margin for the five years from 1903 to 1907. The number of prisoners is increasing, and there were occasions in 1907 when the jail was inconveniently crowded.*

1903	85
1904	103
1905	109
1906	124
1907	136

* In writing this chapter, I am indebted to Mr. A. E. Shuttleworth, Superintendent of Police, for a valuable note on Police and Crime in the district.

CHAPTER XIII.

LOCAL SELF-GOVERNMENT.

THE DISTRICT BOARD.

Outside the Jalpāigurī Municipality and the Buxā Cantonment, the local affairs of the district are managed by the District Board, constituted under the Bengal Local Self-Government Act, III (B.C.) of 1885. This body consists of 17 members, of whom 5 hold office *ex-officio*, 10 are nominated by the Lieutenant-Governor and 2 elected by the members of the Alīpur Duār Local Board. The *ex-officio* members are the Deputy Commissioner, who is Chairman, the Civil Surgeon, the Deputy Conservator of Forests, Jalpāigurī Division, the Senior Assistant to the Deputy Commissioner, and the Deputy Inspector of Schools. As at present constituted, 7 of the members of the District Board are officials and 10 non-officials; 9 are Europeans, of whom 4 are tea-planters. Under the District Board is the Alīpur Duār Local Board with 6 members, all of whom are nominated, and the Subdivisional Officer as Chairman. Four of the members are tea-planters, the Deputy Conservator of Forests, Buxā Division, is a member *ex-officio*, and the 6th member is the *Tahsīldār* of Alīpur, who is usually elected Vice-Chairman. There are no Unions in the Jalpāigurī district. Taking into consideration the difficulties of communication, the attendance at meetings is good and much interest is shown in all matters under discussion. The members from the Alīpur Duār subdivision are able to attend only the more important meetings, as the journey to and from Jalpāigurī entails nearly three days' absence. In the case of a tea-planter from the Sadar subdivision, attendance at a meeting involves his being away from his garden for the best part of two days. During 1907-08, 15 meetings were held, of which one was adjourned for want of a quorum; the average attendance of members was 8. The Alīpur Duār Local Board has not much business to transact and met only four times, excluding one meeting adjourned for want of a quorum. The average attendance of members was 5·4.

Duties of the District Board.

The principal duties of the District Board are the maintenance and improvement of roads and communications and the control of primary education, including the administration of the grant for primary schools, and the award of primary scholarships. The District Board is also responsible for seeing that adequate provision is made for medical relief, and for the proper working of pounds and ferries. The Alīpur Duār Local Board is dependent on the District Board for its income; it is responsible for such work as may be entrusted to it, and allotments are made to it for the maintenance of the roads and bridges in its charge. Except for 75 miles of road, the maintenance of which rests with

the Public Works Department, all the roads and bridges in the district are under the control of the District Board or of the Local Board, which is subordinate to it. It maintains in all 24 miles of metalled and 778 miles of unmetalled road, including 77 miles kept up out of the 1½ per cent grant made to it by Government on account of the Government estates. The total expenditure on education in 1907-08 was Rs. 40,894, of which Rs. 13,707 were devoted to new buildings for primary schools. Pounds and ferries are farmed out to the highest bidders at an annual auction presided over by the Chairman or Vice-Chairman; the term of lease is usually one year, but in special cases settlements are made for longer periods up to three years.

Income and expenditure.

The opening balance at the beginning of 1907-08 was Rs. 19,521 and the receipts during the year were Rs. 1,95,070 giving a total income of Rs. 2,14,591. The expenditure amounted to Rs. 1,74,449, so that the District Board had a balance in hand of Rs. 40,143 at the close of the year. The statements below give the details of income and expenditure for the two years 1906-07 and 1907-08:—

Receipts.

	1906-07.	1907-08.
	Rs.	Rs.
Provincial Rates	79,290	79,583
Interest	22	84
Police (pounds)	26,783	27,515
Education	1,822	2,302
Medical	367	...
Miscellaneous	1,533	873
Civil works (including ferries) ...	52,981	20,383
Contributions	12,879	54,977
Deposits and Advances	9,135	9,353
Total ...	1,84,812	1,95,070

Expenditure.

	1906-07.	1907-08.
Administration	5,890	5,340
Police (pounds)	1,117	518
Education	34,431	40,894
Medical	5,536	3,974
Superannuation Allowances and Pensions	964	1,024
Stationery and Printing ...	454	180
Miscellaneous	1,355	1,180
Civil works	1,48,278	1,09,171
Deposits and Advances	7,603	12,168
Total ...	2,05,628	1,74,449

Government made large grants to the District Board in both years for expenditure on roads and schools.

District Funds were until recently classed as Included Local Funds, and their budgets were incorporated in the Provincial budget. This system entailed great rigidity, as District Boards could not materially revise their estimates of receipts and expenditure without upsetting the Provincial budget. The funds are now classed as Excluded Local Funds, which give the Boards greater freedom and enable them to revise their budgets when necessary, a matter of considerable importance in a district like Jālpaigurī, where all the conditions may be altered by a flood such as occurred in 1906.

THE JĀLPAIGURI MUNICIPALITY.

The only Municipality in the district is that of Jalpāigurī. It was constituted in 1885 under Bengal Act III of 1884, the Union which preceded it forming the nucleus of the new administrative body. At first the Board consisted of 13 Commissioners, of whom 3 were *ex-officio* members, the Deputy Commissioner being the Chairman, while the rest were nominated by Government. As at present constituted, the Board consists of 16 Commissioners, of whom 3 are *ex-officio*, the Deputy Commissioner being the Chairman, 3 are nominated by Government, and the remaining 10 are elected, the town being divided into 5 wards for the purpose. The first general election of Municipal Commissioners was held on July 26th, 1906. There were 12 meetings of the Board in 1907-08, of which two were adjourned for want of a quorum. The percentage of attendance was 38·75, which does not compare favourably with the percentage of attendance of members of the District Board. The area within Municipal limits is 3·71 square miles, and the number of rate-payers is 1,572 or 15·36 per cent of the population.

Income and expenditure.

During the 10 years ending in 1901-02 the average annual income was Rs. 19,959. In 1904-05 it was Rs. 72,582 and in the succeeding year Rs. 56,814, but these sums include the grants made by Government for the new hospital building and furniture. The income in 1907-08 was Rs. 37,962, of which Rs. 5,639 belonged to the Dispensary Fund, the accounts of which are incorporated in the Municipal accounts. The principal sources of income are a tax on persons, which in that year brought in Rs. 7,642, a conservancy tax, including scavenging and latrine rates, which realised Rs. 7,042, and a tax on houses and lands, the receipts from which were Rs. 2,936. Grants and contributions for special purposes amounted to Rs. 5,495 and the Municipality obtained from Government a sum of Rs. 2,000, part of a loan of Rs. 6,000 for the reconstruction of an old wooden bridge over the Karla river. This bridge, which gives access to the market-place, has now been rebuilt and made passable for cart traffic. The tax on persons is levied at the rate of 10 annas per cent on the incomes of the ratepayers and the latrine rate is assessed at 5 per cent on the annual letting value of the houses. The current demand of taxes is

Rs. 18,551; the incidence of taxation being Re. 1-13-2 per head of the population.

The expenditure during the decade ending 1901-02 averaged Rs. 18,354 a year. In 1904-05 it was Rs. 68,361 and in 1905-06 Rs. 74,804, but these amounts include the cost of the new hospital building and furniture. In 1907-08 it was Rs. 33,875, out of which Rs. 6,577 came under the head "Extraordinary and debt." Conservancy is the heaviest charge on the Municipality and cost Rs. 8,576; Rs. 7,748 were expended on medical relief, Rs. 4,497 on roads, and Rs. 1,496 on lighting the streets. The municipality maintains 2½ miles of metalled and 9 miles of unmetalled roads. Seven miles of road within the town are kept up by the District Board, as they form part of the main roads of the district. A staff of 2 Jamadars and 74 sweepers is employed, and conservancy work is on the whole efficiently done. The water-supply is obtained from wells of which there are 21 belonging to the Municipality; well-to-do people have their own masonry wells, but the poorer classes rely on the Municipal wells for their drinking water. The Karla river, which runs through the town, is used only for bathing and washing.

Needs of the Municipality.

The principal requirements of the Municipality are the improvement of the system of drainage, and the filling up of the pits and hollows which form pools of stagnant water during the rains, and contribute largely to the unhealthiness of the town. The drainage of part of the town is towards the Karla river and of the other part towards the low-lying fields beyond the railway embankment. The Municipal Commissioners have done what they could with the limited funds at their disposal to improve the existing *kutcha* drains, but much still remains to be done and more masonry drains are needed in the bazar. A beginning has been made towards filling up the places where water accumulates, but difficulty is experienced in getting sufficient earth for the purpose, and the cost of carting sand from the river Tīsta is so high that it is beyond the resources of the Municipality.

CHAPTER XIV.

EDUCATION.

GENERAL STATE OF EDUCATION.

Education is very backward in the Jalpāigurī district. The population is almost entirely agricultural and the boys are valuable at an early age for many purposes; they are, therefore, not sent to schools situated at a distance from their homes, and are taken away whenever there is much work to be done in the fields. With few exceptions, the people do not live in villages but in groups of houses on the different *jots*, scattered at some little distance from one another, and it is difficult, on account of this, to choose a central site for a school which will be convenient to all residents in the vicinity. Another cause operating against education is the absence of an upper or wealthy class in the district, the population being mainly composed of Rājbansis, lower-class Muhammadans, and Meches, holding small *jots*, and of tea-garden coolies. At the census of 1901 the proportion of the population recorded as able to read and write was 7 per cent for males, and 4 per mille for females or about 4 per cent for the whole population. In 1907-08 there were 13 schools for every 100 square miles, and one school for every 1,929 of the population; 17·4 per cent of the males and 1·7 per cent of the females, or 10·1 per cent of the total population of school-going age, were at school. Even these figures, however, mark a great advance. In 1879 there were only 64 schools, attended by 1,372 pupils, while in 1907-08 the number of schools was 418 and the number of pupils 12,196.

SECONDARY SCHOOLS FOR BOYS. High Schools

There are two High Schools in the district, one of which is the Government Zilla School, and the other is the Debiganj High English School, which is aided by the District Board. The Zilla School had 227 pupils on its rolls in 1907-08, or 18 more than in the previous year; 106 of the boys were in the higher stage, 49 in the middle stage, and 72 in the upper primary stage. The numbers have kept up satisfactorily, as all classes below the 4th were abolished in 1907 and the school no longer teaches the lower primary stage. The school-house was burnt down in 1907, and it is now accommodated in temporary buildings; a good site on the banks of the Tista river has been chosen for the new school-house, and to this will be added hostels for Hindu and Muhammadan boys. The total expenditure on the school was Rs. 6,099, of which Rs. 1,347 were met from Provincial revenues and Rs. 4,752 from fees. The cost per head of the pupils was Rs. 26-13-10. The Debiganj School was formerly a Middle English School, but was raised to the status of a High School during 1907-08 through the exertions of Mr. Narendra Nath Sen, Manager of the Chaklajāt

estates It is well managed and, if it is recognised by the Calcutta University, its numbers will increase considerably. A fine masonry building is being constructed for the school on an excellent site. The number of pupils on the rolls in 1907-08 was 155 of whom 28 were in the higher stage, 25 in the middle stage, 39 in the upper primary stage, and 63 in the lower primary stage. The total expenditure was Rs. 3,891, of which the District Board contributed Rs. 293; Rs. 1,085 were obtained from fees, and the balance was met mainly by grants from the Cooch Behār State. The cost per head of the pupils was Rs. 25-1-7.

Middle English Schools.

The number of Middle English Schools is four, and they were attended by 196 pupils in 1907-08. During that year the Debiganj School was raised to the status of a High School, but its place was taken by the Upper Primary School at Barnes Junction, which was raised to the status of a Middle English School at the instance of the Manager of the Bengal-Duārs Railway. The Deputy Inspector of Schools states that Middle Schools, both English and Vernacular, have decreased both in numbers and in strength since 1897-98, as students who pass the final examinations from them are not eligible for Government service or for a professional career, both of which entail passing the entrance examination of the Calcutta University. Boys, therefore, who desire to go beyond the primary stage, join the High Schools as soon as possible. Of the four Middle English Schools, one is under the direct management of the District Board, two are aided by that body, and the school at Fālākātā receives no aid from the District Board, but obtains considerable grants from the Jotdārs' Fund. This school which is situated in the Western Duārs in a part of the country where, with the exception of a few shopkeepers, the people are all engaged in agricultual pursuits, is much appreciated by the *jotdārs* and did not share in the general decline. The total expenditure on Middle English Schools in 1907-08 was Rs. 2,695, of which the District Board contributed Rs. 261, fees Rs. 787 and subscriptions, including grants from the Jotdārs' Fund, Rs. 1,647. The total cost per head of the pupils was Rs. 14-3-3.

Middle Vernacular Schools.

There were nine Middle Vernacular Schools in 1907-08 with 449 pupils. One of these, which is under the direct management of the District Board, was started during the year; seven are aided schools and the Pātgrām School is unaided. The total expenditure on these schools was Rs. 4,200 or Rs. 9-5-8 per head of the pupils. The seven aided schools expended Rs. 3,543, to which Provincial revenues contributed Rs. 20, the District Board Rs. 778, the Jalpāiguri Municipality Rs. 180, fees Rs. 1,554 and subscriptions Rs. 1,011. The Pātgrām School had 79 pupils on its rolls and cost Rs. 270, of which Rs. 84 were received from fees and Rs. 186 from subscriptions.

PRIMARY EDUCATION FOR BOYS.

Primary education is of the greatest importance in a district like Jalpāigurī, where so many of the people are illiterate. Before

1907-08 much money was wasted in subsidising inferior schools; it used to be the practice to give a grant-in-aid to any school which had managed to exist for six months, without considering its position with regard to already existing schools. During that year a material change was made. Weak and inefficient schools, which were doing no real good, were deprived of their grants and the money thus saved was used to place more efficient schools in a sound financial position, and to enable them to pay their teachers adequately. No grant was made to any school within a radius of three miles of one of these selected schools, which are termed Class I Schools. The immediate result has been a decrease of 140 schools and 2,217 pupils, but the decrease is only temporary and will soon be made up when the new Class I Schools get into working order and the people learn to appreciate them. The number of primary schools in the district in 1907-08 was 345 which were attended by 10,134 pupils. In order to improve the standard of teaching in the schools, two Guru Training Schools under the direct control of Government are maintained at Pochagarh, near Bodā, and at Alīpur Duār. Good buildings have been constructed for them at a cost of Rs. 4,500, and on March 31st, 1908, 5 Hindu and 13 Muhammadan teachers were being trained in them. The total expenditure in maintaining these schools was Rs. 1,571.

FEMALE EDUCATION.

As might be expected from the nature of the population, female education is in a very backward state, the cultivators as a rule seeing no object in educating their girls. On the other hand, in the Santhāl colony, many of the girls attend school and the women show much anxiety to get their daughters educated. The number of girls' schools in 1907-08 was 35 with 597 pupils, a considerable advance from the preceding year when there were only 26 schools and 376 pupils. Taking into account the girls, who were reading in boys' schools, the total number of girls at school was 959. This is a very small proportion of the girls of school-going age, but is, nevertheless, a considerable improvement on former years. All the girls' schools were Lower Primary Schools with the exception of one Middle Vernacular School attended by 41 pupils.

PRIVATE INSTITUTIONS.

The most important of the private institutions are the Maktabs of which there were 31 in 1906-07. Muhammadans are beginning to realise that it is necessary to give their boys a secular education if they are to be in a position to compete with Hindus in after-life, and the result was very marked in 1907-08. Eleven of the Maktabs, while retaining, religious teaching, adopted the Lower Primary Standard and are now classed as Lower Primary Schools. Eleven others were amalgamated with secular schools in the neighbourhood, and only nine retain their original character of institutions teaching only the Koran. There is a Bhutiā school at Chunābāti which is attended by 12 pupils. The teacher is a Lama,

and instruction is imparted in the Bhutiā language. Manuscript books written in the Tibetan character are used.

SCHOOL BUILDINGS.

Village schools have until the last few years been held in any hut or shed which could be made use of for the purpose. The buildings were generally dark, ill-ventilated and unsuitable, and a beginning has been made of replacing them by good school-houses built in accordance with a standard plan. The total expenditure on buildings in 1907-08 was Rs. 27,833, of which Rs. 5,782 were contributed by Provincial revenues and Rs. 14,057 by the District Board, which received a grant from Imperial Funds. Altogether 44 new school-houses were constructed, of which 38 were for Class I Lower Primary Schools. When a new building is constructed for a Lower Primary School, the villagers are expected to contribute one-third or one-quarter of the cost according to their means, and work is not started until the money has been paid in. The response made has been most gratifying; in several instances the people have raised more money than they were asked for in order to construct specially good buildings. Sites are readily given for these school-houses and the land is formally made over to Government.

CONTROL.

Apart from the High Schools, the general control of education is vested in the District Board, and there are school committees for all Secondary and Upper Primary Schools. The inspecting staff consists of the Deputy Inspector of Schools, who is a Government Officer and is *ex-officio* member of the District Board, and four Sub-Inspectors and two Assistant Sub-Inspectors, who are employés of the District Board. The Deputy Inspector acts as the adviser of the Board in all matters connected with education.

CHAPTER XV.

GAZETTEER.

Alipur Duar.—The head quarters station of the subdivision of the same name. It is situated on the north bank of the Kāljāni river, in 26° 29′ N. and 89° 32′ E. Its population in 1901 was 571, but it has much increased since then. Alīpur Duār is named after the late Colonel Hedāyat Ali Khān, who did good service in the Bhutān war and was the first Extra-Assistant Commissioner to be stationed there. It is the centre of a large and increasing trade. It is a station on the Cooch Behār State Railway, and is connected by a good road with Jalpāigurī; another road runs north to Buxā, but this is in bad order up to Buxā Road station, though efforts are being made to improve it. A few years ago Alīpur Duār was a village of thatched huts; only one Mārwāri merchant had a shop with a corrugated iron roof; now new houses are being built on every side and iron roofs are the rule, rather than the exception. The market is of some importance; it was treated as a private market at Mr. Sunder's settlement, and was leased for a nominal sum; as it was badly managed, and a menace to the health of the civil station, Government bought back the market and the surrounding land from the lessee in 1907 for Rs. 5,000; it is now expanding rapidly and promises to be the centre of the trade of the country round Alīpur Duār. The station contains the usual buildings, including courts, a *tahsīl* office, a jail with accommodation for 22 prisoners, and a dispensary. The old dispensary building was burnt in 1906 and the new hospital is a much improved structure with good accommodation for in-door patients. During the last few years the Kāljāni river has been cutting away its northern bank and encroaching on the civil station; the old camping ground has nearly all been cut away, and if the river continues to move to the north, the question of moving the headquarters of the subdivision will have to be considered. Alīpur Duār is not a healthy place; it is situated on low-lying ground where rice used to be cultivated before the annexation of the Western Duārs. There are several old beds of the Kāljāni river in the neighbourhood and one of these, now a stagnant *jheel*, runs right through the civil station. During the rains, water lies about freely, and though much is being done to keep the roads and drains free from jungle, the inhabitants suffer severely from malarious fever. The rains are heavy and last from May to September; the average annual rainfall during the last five years is 140·75 inches. In these months when rain is not falling the heat during the day and often during the night is most oppressive; at such times there seems a want

of sufficient air to breathe, and the steamy atmosphere renders it difficult to summon enough energy to do any work.

The Alipur Duar Subdivision.—The eastern subdivision of the Jalpāigurī district, lying between 26° 24′ and 26° 51′ N. and 89° 3′ and 89° 53′ E. and extending over 1,141 square miles. Its population was 119,353 in 1901 against 72,447 in 1891. It is still very sparsely peopled, the density to the square mile being only 105, but it includes large areas of reserved forest, and the waste land available for settlement is being steadily taken up and brought under cultivation. The subdivision forms part of the Western Duārs and has increased in numbers and prosperity since it came under British rule. The rise of the tea industry has led to the introduction of a large foreign population and many immigrants from the Cooch Behār State and the district of Rangpur have made their homes in it. The subdivision contains the military cantonment of Buxā and 178 villages, at one of which, Alīpur Duār, its headquarters are situated. The chief markets are at Alīpur Duār, Buxā, Fālākātā, and Madāri Hāt; there are also large private markets on some of the tea-gardens.

Ambari Falakata.—Formerly called the Bengal Duārs, a small Government estate, or *tashīl,* lying to the west of the Tīsta, and bounded on all sides by the Bāikanthpur *pargana.* It was annexed from Bhutān in 1865 at the same time as the Western Duārs and takes its name from a mango grove which stands on one of its *jots.* The Karātoyā runs through the centre of the *tahsīl.* The land on both sides of the river is high and sandy, but grows crops of mustard and *aus* rice; the soil is generally inferior to that east of the Tīsta, and there is a tendency for the people to move into the Western Duārs. The area of Ambāri Fālākātā is 9,837 acres or 12½ square miles, of which 9,370 acres were settled by Mr. Sunder in 1889–95. The number of *jots* is 56 which gives an average holding of 167 acres. There are 406 shareholders, and it would be better if the *jots* were split up among them; at present they are too large for an ordinary family to cultivate, and there is much sub-leasing. Many of the under-tenants or *chukānidārs* are the sons and nephews of the *jotdārs*, a practice which is peculiar to this *tahsīl* and is not found in the Western Duārs, and which has been attributed to the fear which *jotdārs* have of losing their lands if any one among the shareholders fails to pay his proportion of the Government revenue. Rates of rent are, however, low, and the *jotdārs* should have no difficulty in paying them; it is more probable that the practice originates in an attempt to save something in case the lands are sold at the instance of a money-lender by order of the civil court.

Bagrakot.—The terminus of the western branch of the Bengal-Duārs Railway. It is situated near the foot of the hills close to the Darjeeling border, and is always much cooler than Dām-Dim, 6¾ miles distant.

Barnes Junction.—A station on the Bengal-Duārs Railway. It is connected by a branch line, about a mile in length, with Barnes Ghāt on the left bank of the Tīsta opposite Jalpāigurī, with which it is connected by a ferry under the control of the railway company. Barnes Ghāt used to be the terminus of the Bengal-Duārs Railway and passengers and goods were ferried across the river and joined the Eastern Bengal State Railway at Jalpāigurī. The construction of the southern branch of the railway in 1898—1900 to Lālmanir Hāt on the Dhubri extension of the Eastern Bengal State Railway gave through communication and avoided the troublesome crossing of the Tīsta river. There is a small bazar at Barnes Junction and a *hāt* started two years ago is flourishing and promises to become an important jute market. The Manager of the Bengal-Duārs Railway has his headquarters at Barnes Junction but intends to move to Domohani where the workshops are situated.

Baura.*—A village situated on a small tributary of the Tīsta in 26° 15′ N. and 89° 5′ E. It can be reached by boats of 30 or 40 tons burden all the year round and used to be the principal river mart of the district, whence large quantities of tobacco, mustard seed, jute, cotton, and hides were exported by water to Serājganj and Dacca. Of late years the merchants have been sending their goods by rail in preference to the river, but the trade of the village shows no signs of diminishing. Out of 111,977 maunds of tobacco carried by the Bengal-Duārs Railway in 1907, 91,800 maunds were despatched from Bāura station and in the following six months 49,499 out of 61,195 maunds.

Bengal Duars.—See Ambāri Fālākātā.

Bhitagarh.—The ruins of an ancient city situated in 26° 27′ N. and 88° 37′ E. The city comprised four separate enclosures, the innermost being the palace of Prithu Rājā, whose date is unknown, but who probably preceded the Pāl dynasty of the ninth century. It occupies a considerable area and must have been in old days a large and strong fortification; it is surrounded by moats, water to fill one of which was obtained from the Tālmā river on the west. The citadel contains a large tank, with the remains of ten masonry ghats. Prithu Rājā is said to have drowned himself in this tank in order to avoid pollution from the touch of the Kichoks, an impure tribe of gipsies who had invaded his country from the north, and his spirit is still believed to dwell in some trees and bushes which grow on the bank adjoining the palace.†

Bhutan Duars.—The tract of country lying along the foot of the Himālayas which was ceded by the Bhutiās after the Bhutān war.

* The population of Bāura in 1901 cannot be given separately. It was included for census purposes in mauza Sibram, the total population of which was 5,117.

† A fuller description of these ruins will be found in Chapter II.

It was divided into two portions; the Western Duārs, which now forms part of the Jalpāigurī district, and the Eastern Duārs, which is included in the district of Goālpārā. The Bhutān Duārs comprises a strip of country about 180 miles in length with a breadth of from 20 to 30 miles.

Boda.—A village on the south-west boundary of the Jalpāigurī district where it marches with Dinājpur. It has a police station, sub-registry office and dispensary and a bench of Honorary Magistrates sits once a week for the trial of petty cases. It is the headquarters of the largest *tahsīl* of the Chaklajāt estates, the property of His Highness the Mahārājā of Cooch Behār. Bodā is connected by road with the Domār station on the Eastern Bengal State Railway (19 miles) and with Jalpāigurī (32 miles). It was at one time a place of some importance, but with the advent of the railway, circumstances have changed and it is never likely to rise to its former position. The *pargana* of Bodā, which now forms the jurisdiction of the Bodā police circle, is the largest in the district and covers an area of 381 square miles with a population of 165,007.

Buxa.—A military cantonment situated on a small gravel plateau 1,800 feet above sea-level, in a valley in the lower range of the Bhutān Hills, in 26° 46′ N. and 89° 35′ E. Its population in 1901 was 581. It commands one of the principal passes into Bhutān and is two miles from Santrābāri, at the foot of the hills and six miles from the frontier. A good road, maintained by the Military Works Department, leads to it from the Buxā Road station on the Cooch Behār State Railway; for three miles this road runs through the reserved forest to Santrābāri whence a hill road, with gradients too steep for carts, winds in and out to the cantonment. Before the railway was constructed troops had to march from Cooch Behār, 32 miles away, and the road was then kept in excellent repair. The cantonment, which was established during the Bhutān war in 1864, consists of a rough fort with 3 pickets called the right, left, and Magdala, on spurs at a higher elevation; it was garrisoned in 1908 by a detachment of the 62nd Punjabis, comprising three officers, and a double company of 200 men. It has been proposed to remove the troops and replace them by military police, but nothing has been settled yet. Water is obtained from two perennial streams, one of which issues from the base of the plateau. The average annual rainfall is 209 inches. Though it is not situated at a high elevation, the climate of Buxā is salubrious and there is little illness among the troops stationed there; the heat is never excessive and *punkhas* are not required. During the rains the place swarms with leeches, and it is impossible to move off the roads without getting covered with them. The Medical Officer in charge of the garrison is Civil Surgeon of Buxā and part of the military hospitals is devoted to the use of patients from the surrounding country; very few patients however, present themselves for treatment

and the building is seldom half full. Buxā lies on one of the trade routes from Bhutān, whence ivory, wax, wool, musk, rhinoceros horns, cotton cloth, *endi* silk cloth, blankets, honey and brick tea are imported and bought by local merchants, who pay for them in cash or barter rice, tobacco, English cloth, betelnut, etc., for these commodities. Large quantities of indigenous wool from Bhutān, Tibet and Central Asia enter India by this route for export to Europe. After the Tibet expedition when the Chumbi valley was held by British troops, much of the trade deserted Buxā, but, since the withdrawal of the troops, the route through the Chumbi valley is less secure and merchants are exposed to the exactions of local officials with the result that they are again using the old road through Buxā.

Chalsa.—A station on the eastern extension of the Bengal-Duārs Railway. A metalled road leads from it to Matiāli Hāt, one of the largest markets in the tea-garden area.

Chota Sinchula.—A peak of the Sinchula range situated about 7 miles north of Buxā Cantonment in 26° 47′ N. and 89° 34′ E. It is the highest point in the Jalpāigurī district and has an elevation of 5,695 feet above sea level. This peak separates British from Bhutān territory.

Dam-Dim.—A station on the Bengal-Duārs Railway and the terminus of the original line. It is surrounded by tea gardens and a weekly market is held which is largely attended by the coolies. The Dām-Dim police station is notoriously unhealthy and the men stationed there suffer severely from malarious fever; it will be removed this year (1908) to Māl.

Debiganj.—A small village on the Karātoyā river, 4½ miles from Domār station on the Eastern Bengal State Railway, with which it is connected by a good road. It is situated on a high open stretch of land and though the temperature is considerable during the hot weather it is a healthy place. Debiganj is the head-quarters of the Manager of the Chaklajāt estates, the property of the Mahārājā of Cooch Behār. The present Manager is an Honorary Magistrate with 1st class powers and sits singly for the trial of cases. There is a good Middle English School here with over 150 pupils which has been recently raised to the standard of a High School; it is held for the time being in temporary huts, but a fine masonry building is in course of construction. There is an independent police outpost at Debiganj and a dispensary, maintained by the Cooch Behār State.

Dhupguri.—A village on the Jalpāigurī-Alīpur road about half way between Māinagurī and Fālākātā. It is the centre of a fertile tract of rice growing country and is connected by good roads with Gāirkātā on the north and Nāothoa on the north-west, at both of which places there are large markets through which supplies reach the tea gardens. The market at Dhupgurī is of considerable importance and much jute is brought to it for sale; it was leased to

a private person for a nominal sum at the last settlement of the Western Duārs and its condition compares unfavourably with that of the neighbouring Government markets. A new inspection bungalow is being built at Dhupgurī. There is an independent police outpost here, but the men suffer much from fever and the place is one of the most unhealthy stations in the Western Duārs.

Domohani.—A station on the Bengal-Duārs Railway about nine miles north of Barnes Junction. The railway workshops are situated here and there is a large market. A good road connects Domohani with Māinagurī, three miles to the north-east, and there is a ferry across the river Tīsta to Pāhārpur on the Jalpāigurī-Dām-Dim road.

Duars, Bengal.—See Ambāri Fālākātā.

Duars, Bhutan.—See Bhutān Duārs.

Duars, Western.—The tract of country, lying along the foot of the Himālayas between the Tīsta and Sankos rivers. It includes some outlying spurs in the north-east of the district, on one of which the Buxā cantonment is situated, and has an area of 1,968 square miles and a population (in 1901) of 410,606. It is bounded on the north by the Darjeeling district and Bhutān, on the east by the Sankos river, on the south by the Cooch Behār State and pargana Bāikanthpur, and on the west by the Tīsta river. This tract, with the Eastern Duārs, which now forms part of the Goālpārā district, was annexed to Bengal in 1865 at the time of the Bhutān war. The Western Duārs slopes from north-west to south-east, and is intersected by numerous rivers and streams, which drain the Himālayas. In the north, a series of well wooded plateaux, rising to between twelve and fifteen hundred feet, form the connecting link between the hills and the plains. Their soil, a reddish loamy clay, in places of great depth, their climate, and the rainfall which reaches 180 inches in the year, are all well adapted to the growth of the tea plant, and the gardens extend throughout their entire area except where the land is occupied by the reserved forests, the area of which is 509 square miles. At the foot of these plateaux used to stretch a belt of grass jungle, which gradually gave way to the ordinary cultivation of the plains, but as far east as the Torsā river nearly all the grass has been cleared away and the land brought under the plough. East of Alīpur Duār the country is thinly peopled and there is still a good deal of waste land available for settlement. The closest tillage is to the west between the Tīsta and Torsā rivers, where rich fields of rice, jute, tobacco, and mustard stretch up to the Cooch Behār boundary. Owing to the development of the tea industry, the population, which was very small when the Western Duārs was first acquired, is rapidly increasing; large numbers of immigrants, mainly from Chota Nāgpur and the Santhāl Parganas, have come into the district to work in the tea-gardens and many of them have settled down in it. The settlement of land for ordinary

cultivation is making great progress; the rates of rent are very low and cultivators are attracted, not only from the permanently settled parganas west of the Tista, but also from Rangpur and the Cooch Behār State. Many Nepalese are also settling in the district. A rough settlement of the Western Duārs was made after its annexation and, with the exception of the forests and the tea-gardens, there were re-settlements in 1874—1880 and 1889—1895. On the last occasion the period of settlement was fixed at 15 years in the case of the four *tahsīls* of the Western Duārs and at 10 years in the case of Ambāri Fālākātā, but it was subsequently arranged that the settlement should run in all cases until March 31st, 1908, and a new settlement is now being made. The average holding of a *jotdār* is 38·6 acres, but the *jots* vary greatly in size, the largest measuring no less than 2608·94 acres; the incidence of revenue to the acre on the whole area is 15 annas 7 pies, or if calculated on homestead and cultivated land only, Re. 1-10-0 an acre. The average holding of an under-tenant or *chukānidār* is 11·4 acres. For administrative purposes the Western Duārs is divided into four *tahsīls, viz.*, Māinagurī, Alīpur, Fālākātā, and Bhālka. The principal Government markets are Māinagurī, Rāmshāi Hāt, Matiāli Hāt, and Amgurī in the Māinagurī *tahsīl*; Fālākātā, Gāirkātā, and Madāri Hāt in the Fālākātā *tahsīl* and Alīpur Duār in the Alīpur *tahsīl*. Many of the tea-gardens have *hāts* of their own and there are several private markets, the most important of which are Bāradighi, Nāothoa, Dhupgurī and Silitorsā.

Falakata.—A village situated on the east bank of the Mujnāi river close to the boundary of the Cooch Behār State in 26° 31′ N. and 89° 13′ E. Its population in 1909 was 287. It is the headquarters of the *tahsīl* of the same name which comprises the tract of country between the Jaldhākā and Torsā rivers. Fālākātā was formerly the headquarters of what is now the Alīpur Duār subdivision. It has an important market at which some of the best jute, tobacco and mustard grown in the Western Duārs are sold and is connected by a good, well bridged road with Madāri Hāt, the eastern terminus of the Bengal-Duārs Railway. It is 32 miles from Jalpāigurī and 22 miles from Alīpur Duār, the main road between which places passes through it. The Mujnāi river is navigable up to Fālākātā by boats of 50 maunds burden throughout the year. An annual fair, lasting about a month, is held in February on the occasion of the Sripanchami festival, at which prizes are given for agricultural produce and stock. Bhutiās used to visit the fair in large numbers but few of them do so now. There is a good dispensary, with a separate building containing beds for in-door patients, and a police station is located here.

Gairkata.—A village on the Angrabāsha river, a tributary of the Duduyā; it has a large Government market and is the centre of a series of roads, maintained by the Public Works Department,

which connect it with the rice growing country on the south, and the tea-gardens on the north. There is a large tea-garden here, the machinery in the factory is driven by a turbine, water for which is obtained from the river.

Jalpaiguri.—The administrative headquarters of the Rājshāhi division and of the Jalpāigurī district, situated on the right bank of the Tista river in 26° 32′ N. and 88° 43′ E. Its population at the census of 1909 was 10,231. The town derives its name from the olive trees which used to exist in some numbers; even as late as ten years ago, many of them were to be seen near the Deputy Commissioner's cutcherry, but these have all died and the only tree left is one in the compound of the American Baptist Mission. The town is divided into two parts by the Karla river over which there are two bridges, one near the Deputy Commissioner's offices, and the other, higher up stream, near the market place. On the east are the bungalows and offices of the Commissioner and Deputy Commissioner, the jail and the hospital; on the west, the European quarter, situated in the old military cantonment, and the main bazar and the railway station. Jalpāigurī is a well wooded town, the main roads being shaded by avenues of trees; in May and June when the *ājār* trees are in flower, the effect is very pretty. A fine view of the snowy peaks of the Himālayas can be seen in clear weather from the iron bridge across the Karla river. The principal buildings are the residential club, where the Duārs Planters' Association holds its meetings, the Bank of Bengal, the Post and Telegraph Office, the District Board Office, the hospital, the jail, and the Deputy Commissioner's bungalow; the last named is a two-storied masonry building well situated on the bank of the Tista, and is the only really good house so far provided for Government officers. A new house is being built for the Commissioner of the Rājshāhi division.

Jalpāigurī has always been a bad place for fires, owing probably to the inflammable nature of most of the buildings. In 1878 the whole of the Government offices, except the treasury, including the Commissioner's office, the Deputy Commissioner's offices, the Judge's Court house and the Munsif's Court were burnt to the ground. In consequence of this fire the Commissioner removed to Rāmpur Boalia, but Jalpāigurī again became the head-quarters of the division in 1888 when Lord Ulick Browne was Commissioner. In 1897 the Munsif's Court was again burnt down, in 1898 the Circuit House, in 1905 the market and surrounding shops, in 1906 the Deputy Commissioner's offices, and in 1907 the Zilla School. The temporary buildings, in which the Deputy Commissioner's offices were housed, were destroyed by fire in 1908. Most of these fires were the work of incendiaries, but the perpetrators have never been discovered. The destruction of the market in 1905 was not an unmixed evil, for good *pucca* shops have taken the place of the old unsightly structures.

The town though small does a considerable trade; it is served by the Eastern Bengal State Railway and is connected with Barnes Ghāt on the east bank of the Tīsta by a ferry. Since the construction of the southern extension of the Bengal-Duārs Railway, which was opened throughout for traffic in 1900, much of the trade, which formerly passed through Jalpāigurī, goes *viâ* Lālmanir Hāt and Parbatipur.

A Municipality was constituted in 1885 and the Board consisted of 13 Commissioners of whom 3 were *ex-officio* members, the Deputy Commissioner being the Chairman, while the rest were nominated by Government. In 1905 the number of members was fixed at 16 including the Chairman, of whom 3 are *ex-officio*, 3 are nominated and the remainder are elected, the town being divided into five wards for the purpose. The Deputy Commissioner is *ex-officio* Chairman. The area within Municipal limits is 3·71 square miles. The average income for the decade ending in 1907-08 was Rs. 34,363 and the expenditure Rs. 33,503; the figures are increased by large grants made in 1904-05 and 1905-06 for the construction of a new hospital building. In 1907-08 Rs. 7,642 were derived from a tax on persons, Rs. 7,042 from a conservancy rate, Rs. 2,936 from a tax on houses and lands, and Rs. 604 from a tax on vehicles. The incidence of taxation was Re. 1-13-2 per head of the population. In the same year, Rs. 1,496 were spent on lighting, Rs. 8,576 on conservancy, Rs. 7,748 on medical relief, Rs. 4,497 on roads, and Rs. 763 on education. The chief educational institution is the High School, maintained by Government, with 227 pupils on its rolls. The hospital was completed in 1905 and has accommodation for 24 in-patients; it is much appreciated by the people and is always full. It was built at a cost of Rs. 31,303 of which Government gave Rs. 15,000, the District Board and the Municipality each Rs. 5,000 and the balance was raised by private subscriptions. The jail has accommodation for 127 prisoners and was built in 1883. The convicts are employed on oil-pressing, twine and rope weaving, cane work, rice husking and carpet making, the products being disposed of locally.

A camp of exercise of the Northern Bengal Mounted Rifles is held every year at Jalpāigurī. The total strength of the corps on April 1st, 1908, was 848, comprising mounted troops 301, maxim gun company 73, cadet companies 424 and reservists 50.

The Jalpaiguri Subdivision.—The western subdivision of the Jalpāigurī district, lying between 26° and 27′ N. and 88° 20′ and 89° 7′ E. and extending over 1,820 square miles. Its population in 1901 was 668,027 giving a density of 367 persons to the square mile, or more than three times that of the Alīpur Duār subdivision. The subdivision includes two distinct tracts—the permanently settled *parganas*, which once formed part of Rangpur, and the Māinagurī and Dām-Dim police circles and the

Dhupgurī outpost which are part of the Western Duārs. The population of the Western Duārs is rapidly increasing while that of the remainder of the district showed a decrease at the last census. The subdivision contains one town, Jalpāigurī, its headquarters, and 588 villages. There are interesting archaeological remains at Bhītargarh and Jalpes. The chief centres of trade are Jalpāigurī town, Titālyā, Bāura, Māinagurī, Amgurī, Matiāli Hāt, and Dhupgurī, and several of the tea estates have large weekly markets of their own.

Jalpes.—A village in *pargana* South Māinagurī, situated in 26° 31′ N. and 88° 52′ E. Its population according to the census of 1901 was 2,088, but this must include many persons who were visiting the fair at the time. It contains a temple of Siva, which was built on the site of an earlier temple by Prān Narāin, one of the Cooch Behār Rājās about three centuries ago. The temple is a massive red brick building, surmounted by a large dome, with an outer diameter of 34 feet, round the base and top of which run galleries; it stands on a mound near the bank of the river Jhordā and is surrounded by a moat. A flight of steps leads down to the basement which is sunk some depth in the mound and which contains a very ancient Siva *linga*.

This *linga* is called Anādi (without beginning) in the hymns of Siva and is also referred to in the Kālikā Purān which relates how "somewhere in the north-west of Kāmrūp, Mahādeo appeared himself in the shape of a vast *linga*." An old established fair is held at Jalpes in February at the time of the Sivaratri festival; it lasts for about three weeks and is attended by people from all parts of the district as well as from Rangpur, Dinājpur, and other parts of Northern Bengal. Bhutiās come from Darjeeling, Buxā and Bhutān with cloth, blankets, ponies and skins and take away cotton and woollen cloths, betelnut and tobacco. The fair has increased considerably in size during recent years.

Kumargram.—A small village at which are situated the headquarters of the Bhālka *tahsīl*. Roads run from it to Alīpur Duārs and to Chakchaka, on the Cooch Behār boundary. A market is held here twice a week. There is a dispensary for the treatment of out-patients, and a subordinate police outpost is located here.

Madari Hat.—A village on the west, or right, bank of the river Torsā and the terminus of the eastern branch of the Bengal-Duārs Railway. It is connected by a good road with Fālākātā on the south, and the Hantapārā tea-garden and bazar on the north. Madāri Hāt is of some importance as a seat of trade and its market, which is held once a week, is growing rapidly. Nearly all the land in the vicinity has been brought under cultivation, much of it by Orāons and Nepālis; jute is becoming a large crop; in 1907 5,454 maunds and in the first six months of 1908, 4,998 maunds of it were despatched from the Madāri Hāt railway station. There is a ferry over the Torsā here, but the crossing is very difficult in

the rains and, during the rest of the year, the wide bed of the river filled with boulders and stones is a great obstacle to traffic; for this reason the tea-gardens east of the river use the Cooch Behār State Railway instead of sending their tea to Madāri Hāt. Sanction has been given recently to the establishment of a police outpost here.

Mainaguri.—A village situated on the Jhordā river seven miles from Jalpāigurī. The main road from Jalpāigurī to Alīpur Duār passes through it and several other roads run from it, the principal of them connecting it with Domohani railway station and Rāmshāi Hāt. The Jalpes temple is four miles from Māinagurī. Māinagurī is the headquarters of the *tahsīl* of the same name and a police station is located here. The small civil station has been laid out carefully; a pretty flower garden has been made round the tank near the *tahsīl* office, trees have been planted and the roads and drainage much improved. The public buildings are all good; the *tahsīl* office, the school house, and the dispensary being the most noticeable. There is a good inspection bungalow on the other side of the river which is bridged at Māinagurī. The market is one of the best in the Western Duārs; the sheds have corrugated iron roofs and masonry platforms; it is well drained and a plentiful supply of water is obtained from wells.

Mal.—A junction on the Bengal-Duārs Railway from which branches run east to Madāri Hāt, west to Bāgrakot on the border of the Darjeeling district, and south to Barnes Junction and Lālmanir Hāt. A large market is held once a week at Batāigol, 1½ miles away on land belonging to the Hahāipatha tea-garden; it is attended by numbers of coolies from the neighbouring tea-gardens. The Dām-Dim police station is being removed to Māl and an Inspector of Police will have his headquarters here.

Matiali Hat.—A small bazar in the centre of the Chalsa group of tea-gardens. A metalled road, maintained by the Public Works Department, connects it with the Chalsa railway station five miles to the south. A large market is held here once a week, and is attended by thousands of tea-garden coolies; the trade is mainly in the hands of Mārwāri merchants, several of whom have shops at Matiāli Hāt and do a flourishing business. There is a police outpost in the bazar, subordinate to the Dām-Dim police station.

Nagrakata.—A station on the eastern extension of the Bengal-Duārs Railway. It is the centre of a large number of tea-gardens, and during the floods of 1906, this part of the district was so completely isolated that rice sold in the market at three seers for the rupee. To prevent this occurring again a road has been constructed by the Public Works Department through the Tondu forest, with a wire rope ferry over the Jaldhākā river, and it is hoped to maintain communication with Nāgrakātā by means of this road even if the railway is again damaged by floods. There is a police outpost here subordinate to Māinagurī. Nāgrakātā derives its name from Nāgra Bhutiā who used to live here.

Patgram.—A village in the *pargana* of the same name, which is an isolated portion of the district lying to the east of the Tista river. The *pargana* is surrounded on all sides by the Cooch Behār State and forms part of the *zamindāri* of the Mahārājā of Cooch Behār, with whose ancestors it was permanently settled in 1793 when it was part of the Rangpur district. There is a police station at Pātgrām and a market at which considerable business is done in jute, tobacco, and rice. It is served by the Bengal-Duārs Railway and is connected by roads with Barnes Junction, Māinagurī and Bāirāgir Hāt about three miles away where a large market is held. A dispensary has been recently established at Pātgrām at the request of the inhabitants and is doing good work.

Rajabhatkhoa.—A station on the Cooch Behār State Railway north of Alīpur Duār. A road runs west from it to the Torsā river and all the traffic from the gardens between the Torsā and the railway line comes to this station. Rājābhātkhoa may be called the working headquarters of the Buxā forest division; the place is little more than a large clearing in the Buxā forest but at times it has quite a large population owing to the amount of timber exported from it. At present most of the timber is carted to Alīpur Duār, but it is hoped that this practice will cease if the railway is converted to metre gauge. There is a small market here managed by the Forest Department.

Rajganj.—A village in *pargana* Bāikanthpur on the main road between Jalpāigurī and Silīgurī. Another road from Bhajanpur on the Titālyā road passes through it and connects it with the railway station at Belakoba on the Eastern Bengal State Railway; this road carries heavy traffic particularly during the jute season. Rājganj is in the Bāikanthpur estate, the Rāikat of which owns the large market to which jute of excellent quality is brought for sale. There is a police station at Rājganj, the jurisdiction of which coincides with that of the old Sanyāsikātā police circle. A miserable rest-house belonging to the Jalpāigurī District Board furnishes the only accommodation for travellers.

Ramshai Hat.—The terminus of a short branch line from Latigurī station on the Bengal-Duārs Railway. It is situated on the right bank of the Jaldhākā river with the Lower Tondu forest on the west and the Dāina forest across the river on the east. Before the construction of the eastern extension of the railway to Mādari Hāt, traffic to and from the tea-gardens east of the Jaldhākā had to use this station and, after the disastrous floods in 1906, this traffic returned temporarily to its old route. Rāmshāi Hāt is connected by road with Chalsa, Nāgrakātā, Māinagurī, and Gāirkātā; its market has decreased in importance but the trade shows signs of reviving. There is excellent big game shooting close to the forests and particularly in the jungle between the Jaldhākā and Dāina rivers which is a favourite resort of tigers.

Titalya.—A village on the Mahānadī river on the border of the Purnea district. It used to be the headquarters of a subdivision of Rangpur, comprising the police circles of Bodā, Sanyāsikātā and Fakirganj, but, in 1867, the criminal jurisdiction of the subdivision was made over to the Deputy Commissioner of the Western Duārs and, in 1869, it was completely separated from Rangpur and united to the Western Duārs to form the district of Jalpāigurī; it now forms part of the Sadar subdivision of the district. Traces of the former importance of Titālyā can still be seen; there are a number of good masonry houses in the bazar and the old race-course is even now well defined and is left uncultivated by the villagers. There is a fine open *maidan* where the Government offices used to stand and this is still used as a camping ground for troops. The Ganges-Darjeeling road passes through Titālyā, the distance to Silīgurī being 16 miles; another road runs due east and connects it with Jalpāigurī. The inspection bungalow at Titālyā is one of the best in the district and is beautifully situated on a small hill overlooking the Mahānadī river. An independent police outpost is located here and there is a dispensary maintained partly by the Jalpāigurī and Purnea District Boards and partly by the Cooch Behār State. A severe type of malarious fever is prevalent in the villages in the neighbourhood and the death rate is heavy; it is not obvious why this should be the case as the country is generally high and open and not subject to floods.

Western Duars.—See Duārs, Western.

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